A

JOURNEY

IN

CARNIOLA, ITALY, AND FRANCE,

IN

THE YEARS 1817, 1818,

CONTAINING

REMARKS RELATING TO LANGUAGE, GEOGRAPHY, HISTORY, ANTIQUITIES, NATURAL HISTORY, SCIENCE, PAINTING, SCULPTURE, ARCHITECTURE, AGRICULTURE, THE MECHANICAL ARTS AND MANUFACTURES.

By W. A. CADELL, Esq. F. R. S. Lond. & Ed.

WITH ENGRAVINGS.

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TO

THE RIGHT HONOURABLE

SIR JOSEPH BANKS, BART. G. C. B.

PRESIDENT OF THE ROYAL SOCIETY,

&c. &c. &c.

THIS BOOK IS DEDICATED,

IN TESTIMONY OF

GREAT RESPECT AND ESTEEM,

BY HIS VERY HUMBLE SERVANT,

THE AUTHOR.

ADVERTISEMENT.

The First Chapter of the following Work relates to Trieste and Carniola; the Chapters that follow, which compose the greatest part of the Book, are descriptive of the North and Middle of Italy; in the last twenty pages, Savoy, Geneva, and a part of France, come under view. The Appendix contains an account of the Antique Marbles of Rome, a view of the Geology of Italy, Tables of Heights and of Population, and a List of Books and Maps. In the Alphabetical Table of Contents, several additions and explanations are inserted. Throughout the Work the Author has compared what he saw with the descriptions contained in books, written at different periods, by inhabitants of the countries he vi-

sited, and has made extracts and references to these works where they appeared correct. Of the Engravings, some are from sketches by the Author, the rest are selected from the works of different artists, and were compared by the Author with the objects they represent, excepting only the two figures in Plate XIII., the Pyramid and Santa Sophia. Seven of the plates contain representations of architectural monuments, drawn on one scale, shewing the relative magnitude of the buildings. The Map of the Middle and North of Italy shews the principal roads, the mountains, and other circumstances, together with the nature of the rocks in several places, indicated by Roman numerals, which refer to the explanation at page 268, Vol. II.

*** *The Table of Contents is in Volume II. p. 281.*



JOURNEY

IN

CARNIOLA AND ITALY.

CHAPTER I.

Trieste —Approach.—Buildings.—History.—Trade and Manufactures.—Money.—Toleration.—Language.—Newspapers.—Inns.—Natural Productions.—Mineral Strata.—Face of the Country.—Basins in the Limestone.—Grotto of Carniola.—Grotto of Adelsberg.—Proteus Anguinus.—Caverns in Limestone. Idria.—Plants.—Indian Corn.—Gourds.—Green hue of the Water—Quicksilver Mine; the Ore; Washing, &c.—Vermillion.—Health of the Workmen.—Road to Trieste.—Mode of Travelling.—Trieste to Venice by Sea.

THE traveller who comes by the Vienna road, discovers Trieste, and the sea from the brow of the hill which he has to descend in order to arrive at the town. The productions of a warmer climate are suddenly brought into view. Olive plantations, and the lofty tapering dark-green cypresses, planted near the country houses, adorn the prospect. The donax reed, the laurel, peach-trees, fig-trees, and vines, are cultivated in the gardens; and the roofs

of houses are formed in the Italian manner, with the tiles called canali, suited to a climate where snow seldom falls.

The modern part of the town of Trieste is built on a piece of level ground, and consists of streets of a good breadth, laid out in straight lines, and at right angles to each other. An inlet, in form of a canal, comes up from the sea into the town, with quays on each side, for ships to load and unload. The Lazaretto, a mile north of the town, is a considerable piece of ground on the water's edge, inclosed with a high wall, to prevent communication, and containing the requisite buildings to accommodate the crews of ships whilst performing quarantine.

The theatre is large and handsome. During the carnival, musical operas in Italian are performed, and, at other seasons, the theatre is occupied by some of the companies of comedians who go about playing in Venice, Padua, Milan, and other towns of the north of Italy.

The cathedral is an ancient edifice, adorned, at the high altar, with two large semicircular vaulted niches called *tribune*. The concave surface of these *tribune* is covered with figures of saints in mosaic, on a ground of gilt mosaic. Much of this kind of mosaic is seen in the church of Saint Mark at Venice. It also occurs in the church of Saint John the Baptist at Florence, in the church of Saint Paul without the city at Rome,

and in other churches in Italy. The art of mosaic painting was employed by the ancient Romans for pavements of rooms, many of which pavements still exist in Italy, France, Spain, and England.* At Constantinople, in a less flourishing state of the arts, mosaic was employed to decorate the internal walls of Santa Sophia, and other churches, and from thence it was again brought into Italy in the middle ages. Beyond the Alps mosaic of the middle ages is not met with in churches. *Ciampini's* work, entitled *Vetera Monumenta*, published in 1690, contains a historical account of the art of forming pictures in mosaic, as practised by the ancients, and in the middle ages.

The columns and two bas reliefs that belonged to an arch in honour of Trajan, are built into the tower of the cathedral.

Some ancient Roman inscriptions and sculptured stones are built into the front of the cathedral, and an ancient marble, with eight busts in high relief, the portraits of a Roman family, having the name inscribed under each bust, has been sawn in two pieces, which form the door-posts of the church. Some other ancient Roman inscriptions are seen in different parts of the town. That concerning Fabius Severus is published by Gruter.

* See the engravings, published by Laborde, of the mosaic at Italica in Spain, and those of different mosaics in England by Lysons.

In the Piazzetta di Ricardo, situated in the old part of the town, is a stone arch with Corinthian pilasters, said to have been built in honour of Charlemagne on his return from Istria. The Piazzetta di Ricardo is so called, from a tradition of its having been the site of the prison of Richard I. Cœur de Lion, after he was taken at Aquileia.

There are some remains of a Roman aqueduct, partly subterraneous, which brought water to Trieste from a distance of six miles. These remains are not conspicuous.

Trieste was anciently the Roman colony Tergeste, mentioned by Cæsar and Pliny. * In the sixth century it was subject to the Exarchate of Ravenna. In the middle ages it was successively subject to the Patriarch of Aquileia, to the Count of Goritz, to the Doge of Venice. In 1382, it came under the protection of Leopold Duke of Austria, and has remained ever since in the possession of the house of Austria.

In the fifteenth century, the trade of Austria and the south of Germany was carried on through the Venetian port of Capo d'Istria, and Trieste was a small place without trade.

In 1719, Trieste was made a free port by the Emperor Charles VI., and after that, during the

* Italy was divided into eleven regions by Augustus, and the *colonia Tergeste* was situated in the tenth region. Plin. Hist. Nat. III. 22.

reign of his daughter Maria Theresa, the population was greatly increased, by Greeks and other new settlers. The new town was built on a flat piece of ground, formerly used for making salt by the evaporation of sea water. In 1753, the harbour was enlarged, a mole was formed to shelter it from the south, and an increase of trade was the consequence of these improvements. The population is now estimated at 40,000 inhabitants.

The trade of Trieste is flourishing, and the Austrian government is inclined to favour it, and to check the admission, into their dominions, of goods brought up the Elbe.

Amongst the exports of Trieste are glass from Bohemia, the produce of mines from Hungary and Idria, linen, tobacco, woollen cloth, potash, wool, from the Austrian dominions and other parts of Germany, manufactured and printed cotton goods from Switzerland.

The imports are cotton wool, dried raisins, &c. from Smyrna; wax, hides, silk, gall-nuts, rice, oil, wool, from the Levant; wheat from the Levant and from Odessa; Indian corn, oats, coffee, sugar, &c. The importation of foreign manufactured goods into the Austrian dominions is prohibited.

In 1790, the number of vessels entered was 6750, and of vessels cleared out 7280. Since that time the number has increased. Many barks of twenty to thirty tons are employed in bringing to Trieste

the produce of the countries bordering on the Adriatic, and in carrying to different ports in the Adriatic the foreign goods that have been imported into Trieste. The communication with Naples is carried on without going out of the Adriatic; goods from Trieste being sent by sea to Manfredonia, and from thence overland to Naples.

The quantity of goods conveyed to and from Trieste by land-carriage is very considerable. They are carried, by way of Laybach and Gratz, to Vienna and Bohemia, and by Klagenfurth, Salzburg, and Innspruck, to Bavaria and Switzerland.

The harbour of Trieste is easy of access, and is protected from the south by a mole.

The *Borra* is a cold east-north-east wind, which sometimes blows in winter with great violence; but as it blows off the land, it does not produce a high sea, and is, therefore, less injurious to the shipping than a sea wind of equal force.

In the road, where there is good anchorage, his Majesty's frigate Tagus, Captain D. Dundas, was lying for some days at this time, (November 1817,) and excited the attention of the inhabitants by her fine appearance.

The tides are perceptible at Trieste, but are considerably influenced by the winds.

The ships built at Trieste are much esteemed. There is a yard with eight building slips, for the construction of merchant vessels of 200 to 600 tons.

The ships are said to last fifty or sixty years, whereas fifteen to twenty-five is the duration of ships built in some other parts of Europe. The oak of which they are built is excellent, and is got near Trieste and Fiume. In the country near Trieste the soil is scanty, upon limestone rock, so that the trees have a slow growth, and produce wood of great density. If the ship has a cargo of salt in her first voyage, the wood is hardened by the salt, and the durability of the ship is thereby increased. Vessels, also, that carry quicklime, are of long duration, the lime absorbing the damp, and, by its caustic quality, preventing the action of worms and the rot. Other cargoes, such as hemp, cotton, and pepper, that hinder the circulation of air in the hold, and confine the damp, are found to occasion the rot in ships. Good cordage is made at Trieste from the excellent hemp of Bologna. The masts are of spruce fir, (*Pinus abies,*) and grow in Hungary and the district of Adelsberg, but they are found to be much inferior in durability to the masts of Norway and the Baltic.

There are manufactories of white lead, soap, leather, bleached wax, maccaroni paste for exportation, an establishment for dyeing Turkey red on cotton, a sugar refining house, &c. In the sugar-house and other manufactories, pit-coal from Bassoviza, some miles distant from Trieste, is used as fuel.

At some distance from Trieste is a paper manu-

factory. From the low price of subsistence, and the consequent lowness of wages, and from the small expence of their rude machinery, the paper is manufactured so cheap, that paper from Britain, made with improved machinery, cannot come into competition with it. The same may be said of the paper manufactories in Italy, some of the finer kinds of paper only being imported from England, France, or Holland; but the manufacture is of so little extent in Italy, that considerable quantities of rags for making paper are exported to Britain from Leghorn, Naples, and Trieste.

Three miles from the town are salt works. The water of the sea is raised up by a scoop into a number of large shallow pools of a rectangular form, and separated from each other by banks of clay. The bottom of these beds is of clay, and is rolled flat and horizontal by a small stone roller, like a garden roller. The water is evaporated by the natural heat of the sun, and the salt forms into crystals, which are raked together by a wooden rake without teeth. The salt is made in May, June, July, and August. During the rest of the year the heat is not great enough to accomplish the evaporation.

In Britain the sun's heat is not sufficient to produce salt at a marketable price, by a complete evaporation of sea water, but part of the process is accomplished by the sun at Lymington in Hampshire, where the sea water, after it has been brought to a

certain density, by exposure in the shallow clay reservoirs like those mentioned above, is pumped up into a pan in which the evaporation is finished by a coal fire.

The salt got near Trieste is not sufficient for the supply of the adjacent countries, and the Austrian government, which has the monopoly of that article, imports salt from Naples and Sicily.

The Austrian government has also the monopoly of tobacco.

In the warehouses at Trieste are seen the iron and steel goods manufactured in Styria. The small scythes are much esteemed.* The files are coarsely made, and sold at a low price. The Styrian steel, of which these articles are formed, is made at one process from the ore, in the same way as the steel of the Hartz, of Brescia of the Pyrennees, and the East Indian steel called Wootz. The English steel made by the cementation of bar-iron with charcoal is more homogeneous, and preferable for cutlery, gravers, files, &c. especially after it has been cast. Very few articles made of cast iron are to be seen. Some cast iron cannon are made at Maria Zell in Styria.

The warehouse for the products of the imperial mines is the deposit of mercury, vermillion, corrosive

* Some of the scythe forges are seen at Schottwien on road from Vienna to Gratz

sublimate and other salts of mercury, and of sheet brass, which is much used in Austria for making spoons, &c.

Minium, made at Villach in Carinthia, is met with at Trieste.

In November 1817, the most common coins in circulation at Trieste were Austrian twenty kreuzer pieces, of base silver,* of the current value of eightpence halfpenny sterling.

Trieste, Carniola, and the other Illyrian provinces belonging to the House of Austria, are favoured by government so far as to enjoy an exemption from the Vienna paper money, which has entirely superseded silver in the common circulation of Austria, Bohemia, Moravia, Hungary, and Styria. This paper money at Vienna, in October 1817, was at one-third of its original nominal value, the notes inscribed sixty kreuzers being current for about twenty, but their value fluctuated from day to day. A one gulden note passed for the value of eightpence halfpenny sterling; the other notes in circulation at Vienna are for two, three, five gulden, and for larger sums.

Roman Catholic is the prevailing religion, and the religion of the government. Joseph II. gave the free exercise of worship to all religions;

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* The silver they contain is only 7-12ths of their weight.—*Nelkenbrechers Munzkunde, Berlin*, 1817.

and this toleration has been continued ever since. The Protestants of the confession of Augsburg occupy the church that was formerly dedicated to Santa Maria del Rosario. They have bells to announce public worship, and their hymns are accompanied by a good organ. On the altar is a crucifix, and over it a painting of Christ. In the church of the Protestants called the Reformed or Helvetic community, all ornament is carefully avoided. There are neither pictures, crucifix, nor organ. The walls are inscribed with texts from Scripture. The greatest number of the community are from the country of the Grisons, whose language is Romanish; * and in that language the service is performed.

* The country of the Grisons is a part of the ancient Rhætia Propria, or Prima, which occupied the southern declivity of the Rhætian Alps; the northern declivity being Rhætia Secunda, or Vindelicia.

The Romanish, Rhætish, or Chur Wälsh, is spoken by about a half of the population of the country of the Grisons; 5-14ths speak German, and 2-14ths a corrupt Italian. The Romanish is a modification of the Romana Rustica, or vulgar Latin, that was spoken in the provinces of the Roman empire. From the Alpine and inaccessible situation of the Grison country, the Romana Rustica has suffered less alteration in the Romanish, than in other languages of which the Romana Rustica forms the ground-work.

The Provençale, or Romance, and, in some degree, the Furlana or Friuli languages, resemble the Romanish. The following example of the Romanish is from Adelung: " A

The Illyrian Greek church is ornamented internally with paintings of saints, on a gilded ground, in the Greek style.

The church of the Oriental Greeks has fewer decorations. Each of these Greek churches is administered by an archimandrite and subordinate priests.

The synagogue is situated in the Ghetto de'Ebrei, the Jewry, or part of the town appropriated to the habitation of the Jews.

The manners and the mode of living in Trieste are Italian; and Italian is the language most generally spoken. It is the language of the church and of the theatre. German, the language of the government, is not universally understood. Many of the labouring class in Trieste are natives of Friuli, and speak the corrupt Italian of that district.* The

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nus manar bec enten pruvament; mo nus spindre d'ilg mal." And lead us not into temptation, but deliver us from evil.—See Planta's Account of the Romanish Language, in the Philosophical Transactions, 1775; Adelung and Vaters Mithridates.

* The Furlano, or dialect of Friuli, is a corrupt Italian, with a mixture of French and Slavic words. It is by some considered to be allied to the Romanish language of the Grison country. The French words that occur in the Furlano were introduced by the priests, who came from Provence and Gascony in the fourteenth century, with the two patriarchs of Aquileia, Bertrand de Quercy and Cardinal Philip. There are poems in this dialect by Brunalesco Brunaleschi, and others.—See Adelungs Mithridates oder sprachenkunde.

country people in the neighbourhood of Trieste, and in other parts of Carniola, speak Krainish, a dialect of the Slavic;* and in this language the church ser-

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* The Slavic languages are spoken in the extensive continuous tract of country which comprehends Russia, Poland, Silesia, Bohemia, and Moravia. In that part of Saxony, which borders on Silesia, the Serbi are distinguished from the neighbouring Germans, by their Slavic language and their peculiar dress.

The Slavic dialects are spoken also in the countries adjacent to Hungary on the east and south, and on the right of the Drave and Danube, namely, Styria, Carinthia, Carniola, Croatia, Sclavonia, Dalmatia, Bosnia, Servia, and Bulgaria.

Adelung's classification of the Slavic languages is as follows:

THE EASTERN SLAVIC includes, 1. *The Russian.* 2. *The Illyrian*, comprehending the Servian, spoken in Servia, Bosnia, Bulgaria, Morlachia, Sclavonic Walachia, Eastern Dalmatia, and the territory of Ragusa, and by the colonies of Servians in Hungary and Transilvania; the Croatian, spoken in Croatia, Western Dalmatia, in the Croatian counties in Hungary, and in some parts of Hungary on the left of the Danube; the language of the Southern Wends, or Krainish, spoken in Carniola, Carinthia, Styria, and in the counties of Œdinburg and Eisenburg in Hungary.

THE WESTERN SLAVIC comprehends, 1. *The Polish*, and the language spoken by the Kasubi in Pomerania, and by some of the inhabitants of Silesia. 2. *The Tschechish*, (Czesky,) or Bohemian, spoken by two millions out of three of the inhabitants of Bohemia, by the inhabitants of Moravia, and by the Slovaks in Hungary. 3. *The language of the Serbi*, who amount to 60,000 in Lausatia. 4. *The language of the Northern Wends*, of whom there are some remains in the dutchy of Luneburg.

vice in the country parishes is performed. A translation of the New Testament into Krainish was published at Laybach in 1786, by orders of the Bishop of Laybach.

The inhabitants of Carniola are composed of the fragments and remains of several different nations,—Uskoques,* a Slavic people, who were driven from Walachia,—Germans† of different races,—the Krainish race which is found all over Carniola; there are besides, five Slavic races varying from the Krainish, and from each other in their dialect and dress, who inhabit different parts of the dutchy.

Styria also contains the remains of several old German tribes; and there are in that province six or

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The Old Prussian and the Lettish, in Livonia and Kurland, are languages composed of Slavic and German.

The Walachian is composed of *Romana Rustica*, or the Latin anciently prevalent in the provinces of the Roman empire, and Slavic. It is spoken in Moldavia, Walachia, Transilvania, the Bukovine, the Bannat, and Upper Hungary, and, on the right of the Danube, by the greatest part of the inhabitants of Thrace, Macedonia, and Thessaly. Persons of rank in Moldavia and Walachia speak Greek and Turkish.

* The Uskoques, 200 years ago, infested the Venetian trade by their piracies. Some of them are called Heiducks, from Heyduk, a captain of robbers. A specimen of their poetical compositions is given by *Fortis, Viaggio in Dalmazia; Venet.* 1774.

† The *Gottshewarer*, one of these small German tribes, are depraved in their morals, and speak a very corrupt dialect of German.—Adelung's Mith. II. Th. 211.

eight different dialects of German. The different tribes are also distinguished by their dress.*

Many of the names of places in Carniola, Styria, &c. are Slavic. In these names, Grad, equivalent to the Russian Gorod, signifies town. Brod, the passage of a river, &c. The word Windisch is prefixed to the names of some towns and districts, denoting that these places are inhabited by Slavi, called Wends by the Germans. Many of the places have two names, one German, the other Italian or Slavic. Laybach is otherwise called Lubiana; Carniola in German is called Krain, &c.

The newspapers in the coffeehouses of Trieste are, —the two German papers published at Vienna,—the Italian papers of Venice, &c.,—an Italian paper for advertisements published at Trieste,—a paper in the Illyrian language, published at Zara, and printed in the Cyrillic letters, which the Russians use,—a Greek paper entitled, τηλεγραφος πολιτικης.† The

* I passed through the town of Marburg in Styria, on the forenoon of the 29th of October, the day the emperor was expected. Arches of green fir boughs were erected in honour of the sovereign; and the town was crowded with great numbers of the country people of different races, Slavi or Wends, Hungarians, and Germans, distinguished from each other by their dress, which was most curiously varied in form and colour.

† One of the largest houses in Trieste is the property of a Greek merchant who has been long established in the place.

Austrian government does not admit English newspapers, and even the British merchants at Trieste find difficulty in procuring them.

The inns in Trieste are like the Italian inns. The Locanda Grande is one of the best, and has a view of the sea.

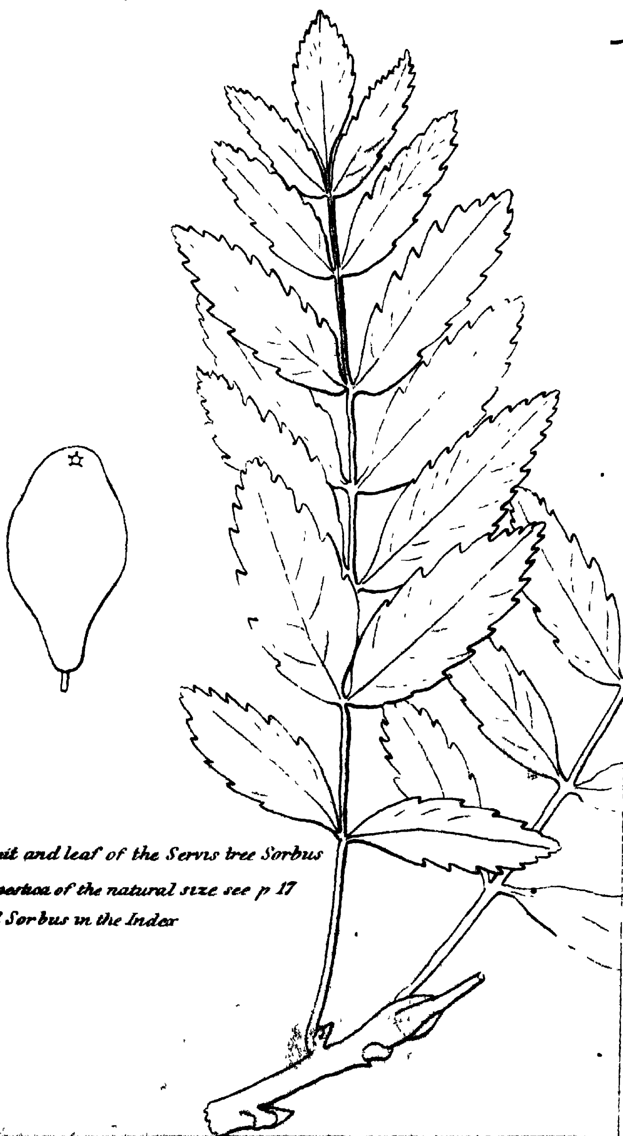
Madame Eliza Baziocchi, one of Bonaparte's sisters, lives at this time (November 1817) at Trieste, and inhabits a handsome house to the south of the town.

The country near Trieste is stony, and contains scarcely any arable land fit for producing grain, so that the grain for the supply of the town must be imported.

The cattle are small. They are used for drawing carts and in the plough. Buffaloes are rarely employed. The sheep fed upon the rocky pastures are esteemed for the table.

Trieste is plentifully supplied with a variety of fish. They reckon 60 kinds of fish and shell-fish. The oysters fix themselves on wooden posts placed in the sea. Considerable quantities of tunny, sardoni, and anchovies, are salted.

The Turkish subjects of the Greek religion, who frequent Trieste, Vienna, and Venice, are frequently termed by the inhabitants of these cities Raitzen. This name, which should be written Rascier, in a strict sense denotes the inhabitants of the southern part of Servia, who live near the river Raska.



Fruit and leaf of the Servis tree Sorbus domestica of the natural size see p 17 and Sorbus in the Index

Lizars Sculp Edin'

The fruits in the market of Trieste in the beginning of November were the following: Apples. A large winter pear, common in the middle and north of Italy. Oranges and lemons. The fruit of the strawberry tree, unpalatable, and full of small seeds. The pods of the caroub; the pod is sweet and eatable, the seeds are hard and are not eaten. The fruit of the *Sorbus domestica*, in shape like a small pear an inch long; * it is eaten when it has begun to rot, and is agreeable to the taste; it is met with at Vienna, and, as that climate is not very mild, it is likely that the fruit would ripen in Britain. Lazzeroni, a pleasant tasted fruit, in size and shape like a very small apple, produced by the *Cratægus rubra*, a fruit-tree common also in the gardens at Rome and other parts of Italy.

Amongst the garden-stuffs in the market is the kohl raabi, a kind of brassica, which produces a pear-shaped bulb above ground, three or four inches in diameter, of the consistence of a turnip, and agreeable to the taste when boiled. This vegetable is commonly cultivated in gardens all over Germany. In Britain, although it has not come into general use,

* Pliny mentions sorbi, with a fruit of a pear-shape, "Sorbis quadruplex differentia. Aliis enim eorum rotunditas mali, aliis turbinatio pyri." Plin. Hist. Nat. XV. 23. A figure of the Sorbus domestica is in Jacquin, Flora Austriaca, 5 t. 447.

it thrives well, and comes to maturity, at least when raised from foreign seed.

Good olive-oil is made at a village two miles north-west of Trieste, and the wine of Prosecco, a village in the neighbourhood, is in some estimation.

The spirit called Sirmischer Slivovitz is met with at Trieste. It is distilled from fermented plums, and is made in Sirmia * near Belgrade. This kind of spirit is also in use at Vienna and Prague.

Besides the limestone rocks which compose the higher ground inland from Trieste, there are strata containing clay ironstone. Pit-coal is wrought at Bassoviza and at Lippiza, some miles distant, and is used as fuel in the sugar-house, the sulphur-refinery, and the soap-work, at Trieste. In the clay ironstone strata is got a stratum of stone, one to two feet thick, used for street pavement. This stratum has the upper and under surface tolerably even. It is broken across into pieces of an irregularly polygonal figure, of the thickness of the stratum, and having a surface of two or three square feet; of these pieces the pavement of the streets of Trieste is made. The pavement of the streets of Florence is formed in the same way of a similar kind of stone.

The limestone or marble of the neighbourhood of

* Sirmium was the capital of the ancient Roman province of Illyricum

Trieste is hewn into door-posts and other carved parts of buildings.

That part of the Vienna road which ascends the steep hill from Trieste was made by Count Zinzendorf, governor of Trieste, in the time of Maria Theresa. In going up there is an agreeable view of the town and the sea, but after the summit the scene changes to a barren rocky country, which continues for several stages on the Vienna road. The rock is limestone, composed of strata nearly horizontal. In some places the surface of this rock is bare for a considerable extent, and very uneven, being full of fissures, and grotesquely perforated with water-worn holes. These bare limestone rocks occupy more than one-half of the surface, there being only a little grass in the space between the prominent parts of the rock. The prominences are generally three or four feet high, and the vegetation between them can afford only a scanty food to a few sheep. From the grey colour of these rocks, the surface of the country looks as if covered with snow or hoar-frost. A green-flowered hellebore (*Helleborus viridis*) is seen here and there amongst the rocks. Near some of the villages there are walnut trees, and a few vines trained high upon a small-leaved maple tree (*Acer campestre*). The common wine of the country is very bad. In the inns on the road the wine is either new and sweetish from the imperfect fermentation, or what they call old wine, which is quite acid. The wine of

Prosecco is the best in the country. In various places of this rocky ground there are round conical pits or basins formed in the limestone by some ancient operation of nature. These basins are of different sizes, some of them about a hundred yards in diameter at the top, and fifty feet deep; the bottom is a plane surface of good arable ground, which is cultivated. On the sides of most of the basins there are trees. As there are many perforations visibly effected by water in the limestone, it may be supposed that the formation of these basins also, is due to the action of water.

There are several caverns of considerable extent in this limestone. Amongst these is the grotto at the village of Carnioli, otherwise called Lohiow, seven miles from Trieste. Its entrance is by a descent along the inclined sides of a natural pit. After this descent we walked into the cavern, in a direction nearly horizontal, the length of 1000 feet or more. The cavern is very lofty in some places; and there is a great quantity of calcareous stalactite often reaching from the roof to the floor. In one place there is clear water, but there is no running stream. The rock in which this grotto is formed is limestone containing shells. The limestone is very cavernous and full of fissures. Many of these fissures are water-worn. The wearing action of the water appears to have taken place after the stone was consolidated, and after the fissures had been formed; the fissures look as if form-

ed before the stone was consolidated. This grotto is similar in many respects to the cave at Castleton in Derbyshire.

The country between Carnioli and Trieste is stony and barren. Near the road at Lippiza, in a wooded piece of ground inclosed with a wall, is kept a breeding stud of horses, established in 1805 by the Archduke Charles; the climate is favourable to Arabian and Spanish horses.

Near Adelsberg, which is thirty English miles from Trieste, and on the road from Trieste to Vienna, is a vast cavern through which a river passes. The river is so considerable as to drive a mill with four water-wheels, about 200 yards above the place where it enters the cavern. We went some hundred feet into the cavern, which is very lofty; * the roof is covered with stalactites. The river is seen running in the cavern, at the foot of a precipice, and fifty fathoms below the path where we were. The river comes out to day again near Alben, called also Planina, after having run under ground for some miles. The *Cyclamen Europeum* grows amongst the stones at the mouth of the cavern.

The lake called the Czirknitzer-see is some miles distant from Adelsberg. From the cavernous nature

* In the work entitled, *Ehre des Erzherzogthums Krain*, by *Joannes Weichard Valvasor at Laybach*, in 1689, there are views of this and other remarkable objects in Carniola.

of the rocks in which it is situated, the water, at certain seasons, becomes low. In the water contained in the caverns of this lake, the singular reptile the Proteus anguinus is found. It has been observed in no other part of the world. Professors Configliachi and Rusconi of Pavia * have lately examined its structure, and are of opinion that it breathes solely by means of the pendulous and fringed gills placed on each side of the throat; and, consequently, is capable of living always under water, as the larvæ of water-newts, which are also provided with pendulous gills, whereas newts in the adult state, and other aquatic reptiles, having no apparatus for respiring the air that is diffused in water, must sometimes come to the surface of the water to inhale the air of the atmosphere into their lungs. These learned observers consider the Proteus anguinus to be an animal in the adult state, and not a larva. But the Syren lacertina, examined by John Hunter and Camper, and the aloxolotl brought from South America by Humboldt, are supposed to be in the state of larva. The eyes of the Proteus anguinus

* See Descrizione Notomica degli organi della circulazione, delle larve delle salamandre aquatiche, fatta dal Dott. Mauro Rusconi, Pavia, 1817; and the description of the Proteus anguinus which Professors Configliachi and Rusconi were preparing to publish in 1818.

The anatomy of the Proteus anguinus has also been examined by the eminent naturalists Schreiber of Vienna, and Cuvier,

are so small as scarcely to be visible, the animal in its native situation, being, like the mole, always in the dark, as it inhabits the water of caverns; the colour of the animal is pink; the length about nine inches; the feet very short. I saw one of these animals alive at Pavia, it was kept in a bucket of water in a dark place, and had been brought from the Czirknitz lake. The country people sometimes bring them alive to Trieste, and sell them as objects of curiosity.

Another river in the neighbourhood of Trieste that appears to have run in caverns, is the Timavo, near Montefalcone, on the road from Trieste to Udine and Venice. It issues at once from the rock, and after a very short course falls into the sea. *

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* Caverns with stalactites, and rivers passing under ground, occur in other countries composed of small-grained limestone. The limestone near Trieste is probably of the same formation with the limestone at Buxton and Castleton in Derbyshire, where large caverns are seen resembling those in Carniola, and with that limestone in which the Rhone runs after leaving the lake of Geneva.

The quantity of water of the Rhone is much more considerable after issuing from the lake, and after it is joined by the Arve, than it is some miles below; the water goes away by the crevices of the limestone; and at the place called La Perte du Rhone, the stream runs for some hundred feet under a cover of limestone strata, and then emerges.

Near Dovedale, in Derbyshire, part of the water goes off into crevices of the limestone, and joins the main channel of the river, after having run under ground for the space of several miles.

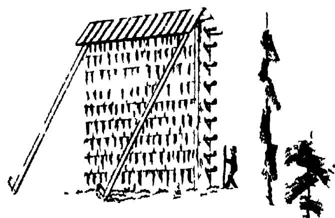
Idria is sixty English miles from Trieste, and may be visited from Laybach, in coming from Vienna to Trieste. The small town of Idria, with its old baronial castle, church, and *via crucis* or calvary in a serpentine form which travellers are apt to mistake for some metallurgic apparatus, is situated in a deep valley, surrounded with verdant and lofty mountains of limestone. The more extensive horizon, seen from the height, is bounded by distant mountains, at this season (the beginning of November) covered with snow.

Wood covers a part of the hills, and adds to the beauty of the scenery. The woods consist of beech, ash, birch, cherry-tree, pear, and apple. I saw no larix, which is common in the neighbouring province of Styria. Spruce fir (*Pinus abies*) is the most frequent of the fir tribe. There are some silver fir, and Scotch fir, (*P. silvatica.*) Barberry, juniper, and the hellebore, called Christmas rose, are met with.

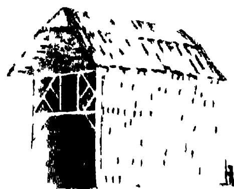
Fern is collected, and kept on a skreen composed of horizontal poles, * to be used for litter to the

* These skreens, or narrow barns, are used in other parts of Carniola for hanging buck-wheat upon. The skreen is composed of two upright posts twenty feet in height. Through holes in the upright posts, horizontal poles are placed, reaching from one upright to the other. On these poles, the buck-wheat, and other kinds of fodder, are placed. A narrow roof

Skreen and Poles on which Buck wheat is stacked in Carniola page 24



Barn on the sides of which Indian corn is hung in Carniola



[illegible]

cattle; and, for the same purpose, beech leaves are gathered in baskets made of hoops.

Indian corn is a good deal cultivated in other parts of Carniola; much of it is seen on the Vienna road, between Gräts and Cilli, in Styria; and it is cultivated partially, as far north as Prague, near the latitude 50°. Gourds also are cultivated in considerable quantity in Carniola and Styria. They are cut into slices, and given to the hogs and cows.

The stream that runs by Idria, when seen from the height, appears of a greenish blue colour. The water, when looked at near, is colourless and transparent. This green colour is observed in other rivers which run over limestone. It is remarkable in the Rhone, issuing from the lake of Geneva.

The mine, from which the quicksilver ore is got, is 450 feet deep. We went down by a stair, with stone steps, inclined about 35 degrees to the horizon. A great deal of wood is employed to support the galleries of the mine. These wooden pillars caught fire ten or twelve years ago, and it was found necessary to allow the water to grow in the mine till it covered and drowned out the fire. They now use piers of stone and lime for supports, in some parts of the mine, instead of wood.—In one of the galle-

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of boards covers the whole, passing from one upright to the other. The sheaves of buck wheat are also sometimes fixed on one upright post.

ries is an altar, with an image of the Virgin, and of St John of Nepomuk, a saint much venerated by the Roman Catholics at Prague, and in the south of Germany.—The Emperor Francis, who makes frequent excursions into different parts of his dominions, descended into this mine in 1816. It has been visited also by the Archduke John, who cultivates and promotes natural science, founder of the school of mineralogy and botany, called the Joanneum, at Gratz, and by some of the archdukes, his brothers.—After going through several parts of the mine, we came up in a bucket, moved by a forty feet over shot water-wheel, which works the pumps that keep the mine dry. The working barrels of the pumps are of bronze, the rest of the pump-pipes are of wood. In Britain, the working barrels and pipes, in similar situations, are now always of cast-iron, which has many advantages; but the cast-iron manufacture in the Austrian dominions is not sufficiently improved to furnish such articles. The daily wages paid to a miner are seventeen kreuzers, equal to sevenpence halfpenny sterling. The adjacent rock is small-grained limestone; and, according to Ferber, the ore is situated in shistus, lying under the limestone.*

The ore is for the most part of a reddish brown colour. Some pieces are incrusted with bright red cinnabar. The mercury exists in it in combination

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* Ferber's Letters.

with sulphur.* Native mercury is found in small quantities.

After the ore is raised from the mine, it is picked and separated into different sorts by the hand. It is then pounded by stampers, and exposed at the same time to a stream of water. The water carries away the small particles of the pounded ore, and, running along a wooden canal, the richest ore, which is also the heaviest, falls down and remains on the bottom of the canal in the form of slime. In the next reach of the canal, the ore of a smaller specific weight is deposited. The ore is sometimes washed in an iron sieve, immersed in a tub of water, in order to separate the heavier parts from the lighter. Use is also made of the large washing-table, inclined at an angle of four or five degrees, and kept in a tremulous motion, whilst the slime and water run over it.

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* The brown ore of Idria, on account of its liver colour, is called in German *Quecksilber leber erz.* Klaproth found the contents of a selected piece of it to be,

Mercury,	818.
Sulphur,	137.5
Carbon,	23.
Silica,	6.5
Alumina,	5.5
Oxid of iron,	2.
Copper,	0 2
Water.	7.3
	1000.0

Some native mercury is collected, by washing the ore, and is sold at a higher price than that obtained by sublimation, being considered more free from mixture.

The ore, being reduced to powder and assorted, is next to be subjected to the process of sublimation. For this purpose, there are vaulted ovens, within which are two or three tiers of brick grating. On the brick grating are placed flat earthen dishes, containing the ore without addition. Fire is made in the lower part of the oven. under the brick grating, and the mercury is volatilized, and passes through a chimney into the cooling-room, where it is condensed, and remains in small drops amongst the soot which covers the walls. The soot probably contains also black sulphuret of mercury. The soot and mercury are swept from the walls, and the mercury is collected in a cavity in the middle of the floor of the cooling-room.

The mercury is measured by a glazed earthenware vessel, with a vertical slit at its upper end; when filled up to the lower part of the slit, the vessel contains twenty-five pounds of mercury. This portion of twenty-five pounds is put in a piece of white leather, the edges of which are gathered up round the mercury, and firmly bound together, by many turns of a string of the size of the little finger. The leather, after being tied, has the form of a round bag, and no mercury can be made to pass from any part of it, even by a considerable pressure. This bag is packed in

a cask made to fit it, and three of the casks are placed in a strong deal box. In this form it is sent off.

The process for making vermillion is not shewn to strangers. It is made of a great many different shades, and is esteemed good; some of it, perhaps, approaches to the brilliancy of the vermillion imported from China. The vermillion is packed like the mercury; it is tied up in brown leather.

Corrosive sublimate, calomel, and red nitrate of mercury called red precipitate, are also made at Idria.

The workmen at the subliming furnaces have their health injured by the action of the mercury on their constitutions. The miners are not affected.

During the four years that the French were in possession of Idria, they wrought a much greater quantity of ore, and produced more mercury, than is now done by the Austrian government.

Mercury was formerly obtained from a mine in Friuli by the Venetians. Almaden in Spain, and Idria, are now the two most considerable mines. It is also extracted at Deux Ponts. The mine of Gualcavalica, in South America, has been abandoned.

Much of the mercury from Idria is sent to Spanish South America, for the purpose of extracting the silver from the ore by the process of amalgamation. *

* The process for obtaining silver from the ore by amalgamation, originated in Spanish South America.

It was afterwards introduced in Hungary by Born, but is in a great degree relinquished there.

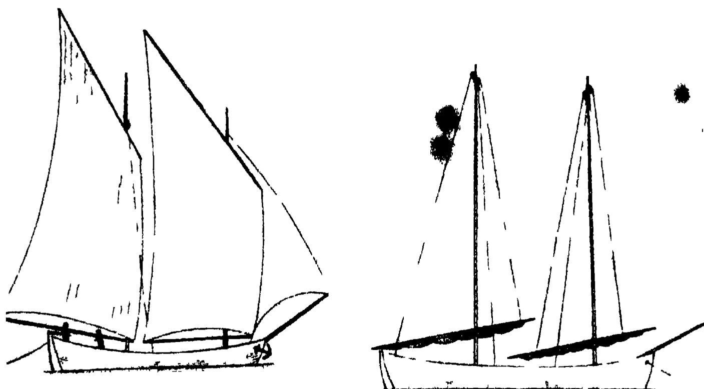
Leaving Idria, a good road conducts us for twelve or fifteen miles mostly along the ridges of the hills, till we came to Lohitsch, on the great road leading from Vienna to Trieste, and to the latter place I returned through Adelsberg, &c.

The transit of goods on this road is very considerable. Sugar, coffee, lemons, and other articles, imported into Trieste, are sent to Vienna and the circumjacent parts of the Austrian dominions; and the glass of Bohemia, and other produce of these countries, is brought to Trieste to be shipped. The road, however, is rough, and is not kept in a sufficient state of repair to facilitate the passage of the numerous four-wheeled waggons, each of which is drawn by many horses. The high roads in Italy are kept in much better order.

The diligence from Vienna to Trieste, which travels all night, except one night at Gratz, and makes out the journey, of about 300 English miles, in eight days, is a heavy vehicle in form of a coach, and suspended on steel springs. Although not excellent, it is better than the public conveyances in Hanover and Saxony, and not worse than several of the diligences in France; but these last are now improving by the adoption of coaches

* In Saxony the process is carried on with much activity, and with well constructed machinery, at the amalgamation establishment at the Halsbrücke, near Freyberg, as I witnessed there in 1817.

COASTING VESSELS ON THE ADRIATIC P 31



Edinburgh Published by A. Constable & Co 1820.

made in the English way. There are also coaches that go between Trieste and Vienna, when they have got their complement of passengers, and travel with the same horses, stopping at night. Travellers that take post-horses may have a calesh at each post-house, for which they are charged a fixed hire, but these caleshes are not very commodious, so that it is better for those who travel far with post-horses to procure a carriage for the whole journey.

There are numerous barks which carry goods between Trieste and Venice. They are like the other coasting vessels of the Adriatic, about thirty tons burden, with two masts, and a lug sail something in the latine form, to each mast. With these sails they are able to go well before the wind, but cannot beat up against a wind so well as a sloop-rigged vessel. In one of these barks I went from Trieste to Venice. The passengers have the use of a cabin and beds, but must not expect very delicate accommodation. Soon after the time of which I speak, a steam-boat, for conveying passengers from Trieste to Venice, was constructed by the American Consul.

The distance is seventy English miles, and is gone in twelve hours with a good wind; but the wind proving unfavourable, we put into the harbour of Pirano, a small town in Istria, with a church tower built on the model of the tower of Saint Mark at Venice. The Venetian lion is seen sculptured on several of the buildings, the town having belonged

to the republic. It is inhabited by sea-faring men, who, like other sailors in this part of the Adriatic, wear a brown great coat with a hood that goes over the head.

The chamber of commerce of Trieste, in 1818, erected a lighthouse near Pirano, illuminated by the gas from pit-coal.

At Pola on this coast, forty miles south of Trieste, are the remains of a Roman building, consisting of an elliptical wall of three floors, with rustic arcades like the outer wall of the amphitheatre at Verona. Maffei * considers this fabric to have been a theatre and not an amphitheatre, as the seats are on one side only, and formed on the declivity of a hill. The length, according to that learned author, is 416 English feet, the height 97. It is the only one of the Roman elliptical precincts that now remains entire in its whole circumference; about a half of the precinct of the amphitheatre at Rome, and the greatest part of the precinct at Verona, having long since come to the ground.

The wind becoming favourable, we sailed from Pirano, and arrived at the port of Lido, the entrance of the Laguna, where there is a fort to guard the passage, and from whence, after a tedious examination of baggage by the custom-house officers, we proceeded in a boat the distance of two or three miles to Venice.

* Verona Illustr. parte quarta.

CHAPTER II.

Venice.—Laguna.—Ancient state and decline of Venice.—Saint Mark's Place.—Saint Mark's Church.—Ducal Palace.—Library.—Churches.—School of Saint Rocq.—Academy of Painting.—Mode of Building.—Public Garden.—Collection of Minerals.—Climate.—Coffeehouses.—Theatres.—Rialto Bridge.—Arsenal.—Fish and other productions.—Wells.—Armenian Monastery.—Manufacture of Glass Beads.—Burying Ground.—Islands of Torcello, &c.

The Laguna is separated from the sea by a line of narrow sandy islands. This line is broken by three passages, which are the principal entrances into the Laguna;—the most northerly at the port del Lido, by which we entered;—the passage at the port of Malamocco, between the points of the two longest of the sandy islands;—and the most southerly at the port of Chiozza.

At Chiozza, at the southern extremity of this line of sandy islands, massive stone bulwarks, called Murazze, have been constructed, to render the defence against the action of the sea more secure.*

* The strengthening the barriers that defend the Laguna against the sea is recommended in the *Trattato delle acque di Luigi Cornaro*, published at Padua in 1560. The same author, who, in his work, *De Vita Sobria*, gives an agreeable

The Laguna, within the line of sandy islands, is an extensive bay, a great part of which is so shallow as to be dry at low water. It is intersected by channels of various depths, some of them deep enough to allow ships of considerable size to come close to the town.

The silt, or sandy mud, accumulates in the Laguna, and tends to exclude the sea. This extension of the land, by alluvial matter, has taken place in different situations on the Adriatic, near the mouths of the Po; and particularly at Ravenna, which was anciently on the edge of the sea, but, from the accumulation of mud and sand, is now three or four miles inland from the shore. To counteract this filling up of the Laguna, in the beginning of the sixteenth century, a part of the river Brenta was made to discharge itself near Chiozza; and the bucket-dredging machine, called by the French Marie salope, is used for keeping the channels clear of silt.

There are several low islands in the Laguna. The city of Venice is built on two of these islands, separated from each other by the great canal, which has a serpentine course. The two islands are again

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description of the way in which he passed his old age, and of [illegible] temperate regimen he observed, with the desired effect of keeping off the diseases to which his delicate constitution was predisposed. He was a wealthy Venetian of the distinguished family of Cornaro, and lived to the age of 98.

subdivided by a great many smaller canals. The long narrow island of La Giudecca, so called from having been formerly the residence of the Jews, being at a short distance, is included in the city. The surface occupied by the city may be about one English square mile and a half. The population is stated to be 120,000; sixty years ago, it was 170,000. Murano, and some other islands covered with buildings, are more distant, and are to be considered as separate villages.

The province, called Venetia by the ancient Romans, was bounded by the Adda, the Rhœtian and Julian Alps, and the Po. Maffei gives the history of that province to the time of Charlemagne. *

About the year 450, the cities of Aquileia, † Padua, and others, situated in the ancient province of Venetia, were ruined by the Huns under Attila, and the inhabitants took refuge in the islands along the coast. On the island of Ripa-alta, or Rialto, the first foundation of the city of Venice was laid. An epistle of Cassiodorus, prætorian prefect, and

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* Maffei Verona Illustrata, parte prima.

† The inhabitants of Aquileia took refuge on the island of Grado, not far distant from Aquileia. In 570, the patriarch of Aquileia, flying from the Lombards, removed his treasure to Grado, which was called New Aquileia. The patriarchs of Aquileia were adopted by the infant republic of Venice, became the ecclesiastical primates in the Venetian territory, and, in 1450, the seat of the patriarch was removed from Grado to Venice. Of the city of Aquileia, which was at its greatest in the fourth century, little now remains.

minister of Theodoric, describes the state of the islands of the Laguna in 523, seventy years after Attila's irruption.* At that time the chief produce of these islands was fish and salt. The inhabitants had trading barks that ascended the Po, and the neighbouring rivers, and vessels that traded in the Adriatic. They performed the transports of wine and oil from Istria to Ravenna, Theodoric's royal residence. The epistle of Cassiodorus, which is addressed to the twelve tribunes, or magistrates, shews that the islands of the Venetian Laguna were at that time subject to the Gothic kingdom of Italy.

Charlemagne resigned all claims to the sovereignty of Venice. His son Pepin made an unsuccessful attack upon the islands of the Laguna. The Venetians then, and in the ninth and tenth centuries, considered themselves as an unalienable portion of the Greek empire of Constantinople. Venice in religion did not adhere to the Greek church; but she was less servile in her obedience to

* This epistle is commented on by Maffei, Verona Illustrata.

The anonymous Chronicle of the Eleventh Century, and the Chronicle of the Fourteenth Century, composed by the Doge Andrew Dandolo, are the oldest chronicles of the Venetian history.—See Muratori Script. Rer. Italic. Tom. XII. Paruta's History of Venice, from 1513 to 1551, and his History of the War of Cyprus, from 1570 to 1572, are much esteemed. Paolo Ramusio il Giovane, Storia della Guerra di Costantinopoli, is partly a translation of Villehardouin, who was a commander in that war.

the Popes than many other Catholic states, and the Papal laws against usury, and other inquisitorial laws of the church of Rome, were never acknowledged by the republic.

The annual election of the twelve tribunes passed into the permanent command of a doge or duke. The government was then a mixture of democracy and monarchy; the doge was elected by the votes of the general assembly, and reigned with the authority of a prince whilst he was successful; but when bad fortune prevailed in the public affairs, he was deposed, banished, or put to death, by the multitude.

In the twelfth century began the power of the aristocracy, which reduced the doge to the mere appearance of command, and deprived the people of all power.

After the capture of Constantinople by the combined forces of the Venetians and the crusaders, and the subsequent election, by these two powers, of Baldwin, Count of Flanders, to the imperial throne, Venice possessed three of the eight parts into which Constantinople was divided, and the doge, till 1356, was styled Dominus quartæ partis et dimidiæ imperii Romani, the lord of one-fourth and of the half of a fourth of the Roman empire.*

Along the sea-coast, from Ragusa to the Helles-

* See Gibbon's Decline and Fall of the Roman Empire.

pont and Bosphorus, the Venetians had a chain of factories and towns, many of which were held by Venetian families in feu from the republic. The Venetian family of Sanuto held the dutchy of Naxos, which comprehended the greatest part of the Archipelago.

The island of Candia was purchased by the republic from the Marquis of Montferrat, one of the crusaders, who got that island and the kingdom of Macedonia as his share of the spoils after the capture of Constantinople.

Corfu, Cefalonia, Zante, &c. were conquered by the republic and by the feudatory nobles of Venice.

Padua, Vicenza, Verona, Brescia, Bergamo, and other cities, were acquired in 1410.

Venice possessed the East India trade when the goods were brought to Europe by the Levant. But she lost this trade after the route by the Cape of Good Hope was discovered by the Portuguese.

In 1508, Venice had the energy and the good fortune to withstand the combination formed against her by the league of Cambray, composed of the Emperor Maximilian, Louis XII., Ferdinand of Arragon, Pope Julius II., and the Duke of Savoy.

In 1618, Venice was on the eve of being destroyed by a conspiracy, at the head of which was the ambassador from Spain.*

Candia was lost in 1669.

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* See the Abbé de S. Real's Account of the Conspiracy of the Spaniards against Venice.

A hundred years ago Venice was already in a state of decline, and had lost much of her trade.*

France and Austria had long speculated upon seizing the Venetian territory. At the peace of 1747, France offered to allow the Empress Maria Theresa to occupy the Venetian possessions. During Bonaparte's campaign in Italy in 1795 and 1796, the Venetian government did not possess sufficient energy to take a decided part or to maintain a respected neutrality. Verona, Brescia, Vicenza, Padua, Friuli, and the rest of the Venetian territory on the mainland of Italy, were the seat of war between the French and Austrians. The French troops were maintained and equipped, and their generals enriched at the expense of these provinces, which were at length revolutionized and taken possession of by the French, notwithstanding the submissive conduct of Venice. The Venetians had no effective fleet, † England had the command of the Adriatic, but want of union prevented the Venetian government from taking advantage of the assistance of England to defend the town, which, from its situation, was considered as impregnable. Many Venetian nobles, members of the government, were in

* Addison's Remarks on Italy, in 1701.

† In 1786, the Venetian fleet was scarcely sufficient to keep the pirates of Tunis in order, and failed in an expedition against that place.

the French interest. The 12,000 Sclavonian troops in the pay of the republic were disbanded and sent home, and after Bonaparte had concluded the Italian campaign by the treaty with the Austrians at Campo Formio, the French were admitted into Venice in May 1797, the ancient government of the republic was dissolved, and a new government, on the French revolutionary model, was substituted in its place. Thus Venice lost her independence, after having subsisted, with various fortune, for upwards of 1000 years.

Under the French, Venice continued from 1797, for eighteen years, till the fall of Bonaparte's power, and since that she has been subject to the Austrian government, forming part of the Lombardo-Venetian kingdom.

Venice is no longer the brilliant and prosperous city from whose stories Shakespeare chose the subject of his plays; the life is gone, * but the material

* Two hundred years ago Venice was called the rich, Venezia la ricca; and the following epithets, some of which still continue to be applicable, were given to the other cities of Italy: Roma la santa, Rome the holy, Napoli la gentile, Naples the courtly, and the abode of nobles; Genova la superba, Genoa the magnificent, on account of its fine palaces; Milano la grande, Milan the great, from its extent and population; Firenze la bella, Florence the beautiful, on account of the neatness of the streets and the agreeable situation of the town; Bologna la grassa, Bologna the fertile, on account

remains of former magnificence still exist in the works of the eminent artists whose talents were called into action 300 years ago by the wealth of the republic, the pictures of Titian and Paul Veronese, and the buildings of Sansovino.

Saint Mark's Place, and the Merceria, which leads from Saint Mark's Place to the Rialto, are the most frequented parts of the town. In the more remote parts there are many untenanted houses going to ruin. Much of the trade that formerly gave animation to the city has been transferred to Trieste.

Saint Mark's Place is an oblong rectangle, surrounded on three sides by buildings in a good style of architecture, on the ground-floor of which is a gallery with open arcades, forming a public walk.

The south side was commenced by Sansovino; *

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of the fertility of the adjacent country, Ravenna l'antica, Ravenna the ancient; Padova la dotta, Padua the learned, on account of the university.

* Jacopo Tatti, called Sansovino from the name of his master's birth-place, was born at Florence, studied at Rome, along with Michael Angelo, and even aspired to emulate that great genius. It is remarked, in an account of Sansovino's life, that he was qualified to hold the first place amongst his companions, but not when Michael Angelo was present,—*Jacopo era nato per primeggiare ma non ove fosse Michel Agnolo.* Sansovino's architectural works at Venice are the zecca or mint,—the building formerly employed as the library of

part of it is by Scamozzi, and the rest successively by three other architects. * It is of Istrian marble, was begun in 1583, and finished in 1682. The architecture is nearly uniform; it was called the Procuratorie Nuove, and contained the habitations for each of the nine procurators of state. The French converted the Procuratorie Nuove into a palace for the sovereign, and it is still used for that purpose by the Austrian government, and contains a splendid suit of rooms for the emperor.

The Procuratorie Vecchie, the range of buildings on the north side of Saint Mark's Place, was built about the year 1500. It has the windows disposed in arcades, and is not so much decorated with sculpture as the Procuratorie Nuove.

The small west side of Saint Mark's Place formerly contained the church of Saint Geminiani, which interrupted the arcaded walk, but this church has been removed by the French, who constructed in its place the grand staircase of the palace, and the arcades are now continued without a break, round the three sides of Saint Mark's Place.

Saint Mark,—the palace of the Cornaro family on the great canal, which was burnt in December 1817,—the Scuola della Misericordia, and some churches. There are also several statues executed by Sansovino at Venice. He died at Venice in 1570, at the age of 91.

† F. di Bernardino, M. della Carita, and Longhena.

The pavement of Saint Mark's Place is of squared pieces of grey marble, with tracery in white marble. It was first paved in 1723.

In the form and in the galleries, Saint Mark's Place resembles the Palais Royal at Paris, but is not a scene of such bustle.

At the east end of Saint Mark's Place is the church of Saint Mark, in the round-arched style of architecture that prevailed in the middle ages. It was built about the year 1000, and contained the body of Saint Mark, brought from Alexandria by the Venetians in 829. The first church of Saint Mark, on the same site, was built in 828, and consumed by fire in 976.

The church has five domes, which admit no light, and are low.

The interior has a gloomy appearance. The walls and ceiling are decorated with scripture histories in mosaic, executed at different periods, from the eleventh century downwards. Some of the finest pieces of mosaic are of the year 1545, by the brothers Zuccati of Trevise, who wrought after the designs and with the advice of Titian.

The atrium or vestibule, a kind of portico that runs along the front and part of the sides of the church, is also adorned with mosaic, as is the exterior front of the church.

In the church are sculptures by Sansovino.

There are a great many antique columns of marble and porphyry, but mostly of a small size.

In the middle of the church is a large brass lustre, in form of a cross, with four arms.*

In the vestibule are the tombs of some Doges, and several Latin inscriptions of the eleventh and twelfth centuries, in letters called Lombard, which are a modification of the Roman letters. The oldest of these inscriptions is in memory of the Doge Vitale Falerio, who died in 1096.

Above the middle door of the front are now again placed the four antique bronze horses, after having decorated the *Place du Carousel* in Paris. These horses are not seen to advantage in this situation, being too far from the eye. They are supposed to have been brought from Constantinople, after the combined army of the Crusaders and Venetian fleet had taken that city in 1204.† These horses are ably executed, but they are thought to be inferior in

* The mode of disposing lamps in form of a cross was adopted by Bernini, in the church of Saint Peter's at Rome, where the great illuminated brass cross displayed at Easter is admired for its simple form, and the just proportion it bears to that vast edifice.

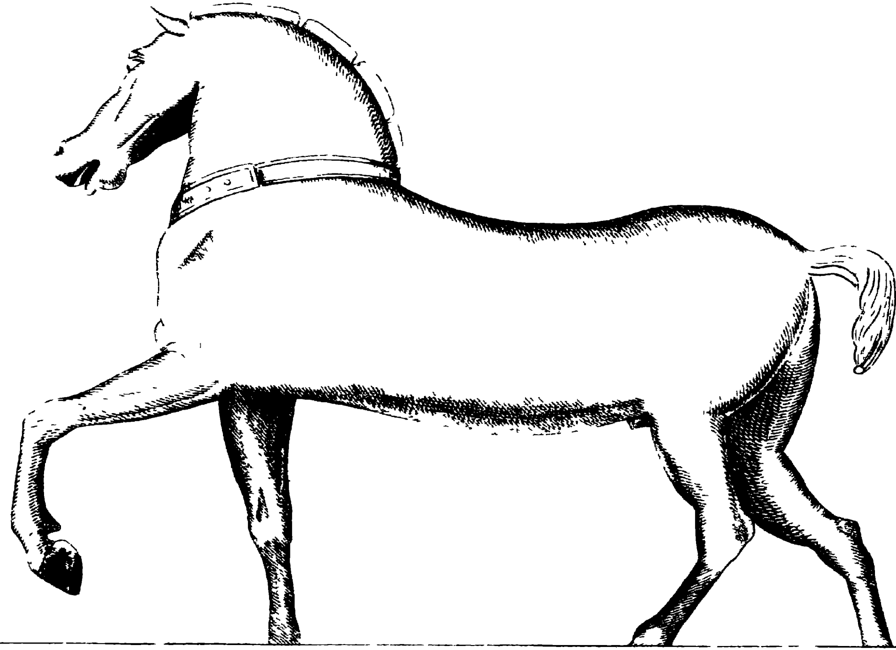
† See Sanuto vite degli Dogi in Muratori Scriptor. Rer. Italic. Tom. XXII.; and Paolo Ramusio de Bello Constantinopolitano et Imperatoribus Comnenis per Gallos et Venetos restitutis, Venet. 1635. Nicetas, a senator of Constantinople, enumerates, in his history, the ancient bronze statues that were broken and coined into money by the Crusaders and Venetians, after getting possession of Constantinople.

Form of the letters of inscriptions of the 13th Century in Saint Marks church at Venice *page 44*

a c d e f g k i l m n p q

s t v u x 1 2 8 0

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One of the four Antique bronze horses of S^t Marks as seen on a pedestal

spirit to the horses' heads in the Elgin collection, and the equestrian statue of Marcus Aurelius in the court of the Capitol.

The south and west sides of the ducal palace, which was rebuilt in 1439, produce an agreeable effect; they are of pointed arched Gothic architecture, and the walls are chequered with marble of two different colours, light red and white, disposed symmetrically.

The palace is built round a court, the east side of which consists of round arcades, more modern than the exterior part of the building, being of the style of the sixteenth and seventeenth century. On the balustrade of the Scala de'Giganti, within the court, are two colossal statues of Mars and Neptune, by Sansovino, erected in 1566.

The interior of the palace is occupied by courts of justice and public offices, and contains pictures and other decorations. In one of the rooms is a set of large geographical maps, painted on the walls, after the maps of Ramusio. *

The hall of the great council, a very large and noble room, is now occupied by the public library, and contains a collection of antique statues, presented to the republic by Giov. Grimani, patriarch of Aquileia. † The side walls are adorned with pictures

* Large painted maps also occur in the Vatican.

† An account of these statues is published by Zanetti.

on canvas, relating to the history of Venice, and one end is covered by a very large picture of the saints in celestial glory, by Jacopo Tintoretto. On the ceiling are paintings by Paul Veronèse and others.

There are some celestial and terrestrial globes by Coronelli. *

The library, before the extinction of the republic, was kept in the building erected by Sansovino, opposite to the ducal palace, and has since been removed to this great hall. Petrarch gave his library to the republic of Venice, but the books were neglected and lost. In 1468, Cardinal Besarion † made a donation of his extensive collection of manuscript books to the church of Saint Mark; and

* Coronelli, a native of Venice, a monk of the minor conventual order, author of many folio volumes on Geography, made, in 1683, the two large globes that are seen in the *Bibliotheque du Roi* at Paris, 11 feet, 11 inches, 6 lines, French, in diameter, and of which there is an account published by De la Hire. They were made by order of Cardinal d'Estree, and presented by him to Louis XIV. A large modern terrestrial globe, of about the same size, and made in the latter part of the eighteenth century, is in the Mazarine library at Paris.

† Besarion was born at Trebizond, and educated at Constantinople. He was one of the Greek ecclesiastics that accompanied John Paleologus II. to the council held at Florence, for the union of the Greek and Latin church. This council was held only fourteen years before the Turks got possession of Constantinople. Besarion came over to the opi-

this gift is the first commencement of the public library of Saint Mark.* The cardinal's portrait is seen in the library.

In this and other libraries of Italy are seen collections of the finely printed editions, by the celebrated Venetian printer, Aldus Manutius. †

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nions of the Latin church, and was made cardinal in 1439, by Eugenius IV. He was employed by the popes in embassies; was legate at Bologna, &c. He wrote in defence of Plato and other works, which are enumerated in the Bibliotheca Græca of Fabricius. Besarion died in 1472, at the age of 77.

* See Dissertazione della Publica Libreria di San Marco, da Jacopo Morelli, 1774.

† The elder Aldo Manuzio was born near Rome in 1447. He was a man of learning, and, in 1494, formed an establishment in Venice for printing Greek and Latin works. He published almost all the Greek and Roman classics. Erasmus lived with him for some time, and had his Proverbs printed by Aldus. The letters of Aldus are admired for their Ciceronian Latin. He died in 1515, at the age of 68.

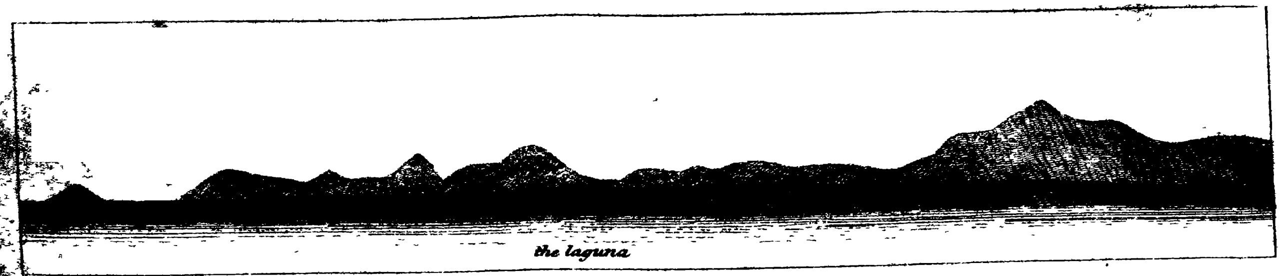
The printing establishment at Venice was continued by his son Paolo Manuzio, who likewise printed at Rome in the senator's palace in the Capitol, with the Rubric, Apud Paulum Manutium in Ædibus Populi Romani, 1562.

Aldo Manuzio the younger, and son of Paolo, was professor of literature at Pisa and Rome, and superintendent of the printing-house of the Vatican.—See Foscarini Storia della Letteratura Veneziana. Tiraboschi, st. d. lett. Ital. Apostolo Zeno Notizie del Manuzio.

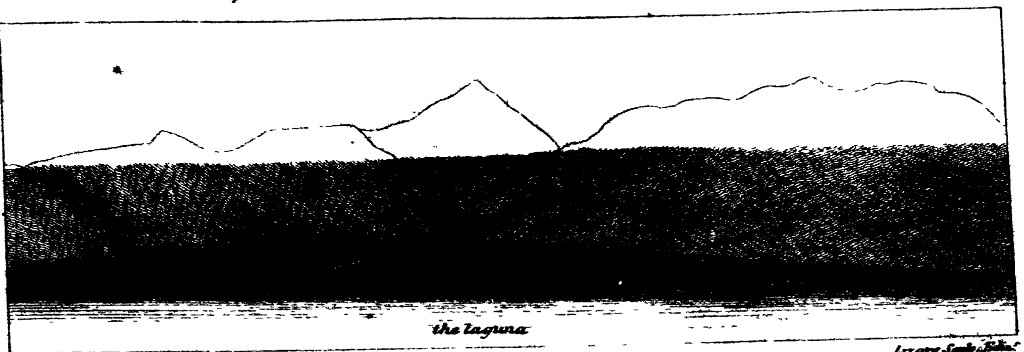
On the place called Broglio are two columns of thirty feet or more in height, brought from Greece in the time of the Doge Tiani. Each of the columns is of one stone. One of them is of small-grained grey syenite, and on its top is now again placed the bronze winged lion by Donatello, which, during Bonaparte's reign, was removed to the Place of the Invalids at Paris. The other column is of red Egyptian large-grained granite, and has on its summit a statue of Saint Theodore, formerly patron of the city, till the republic thought fit to choose a more dignified protector Saint Mark.

The Campanile, a square tower of brick, in Saint Mark's Place, is 350 English feet in height, and was built in 1148, in the reign of the doge Domenico Morosini. At the base of the tower, on the east side, is a small ornamented building by Sansovino, called la logetta. The tower is composed of a double wall, and between the walls is an inclined plane of brick, without steps, which winds round the central tower and leads to the top.

From the gallery at the top of the tower there is a view of the town and the Laguna. The point of sight is not high enough to open the great canal, nor even the canal of the Giudecca, so that the three principal islands of Venice appear in one. To the north the view is bounded by the Friuli, or Julian Alps, which occupy about ninety degrees of the horizon,



The Friuli Alps seen in December on the northern horizon A Trevise distant 17 Eng. miles



W. A. C. del. Lizars Sculp. Edin.

Edinburgh Published by A. Constable & Co. 1820.

extending from the neighbourhood of Trieste to the mountains near the lake di Garda. The upper part of this range of mountains is covered with snow at this season, (November 1817.) At their foot are lower hills, and a plain extending to the sea. In this plain several towns are seen, amongst others Treviso. Thirty miles distant, and rising above the level horizon to the west, are the hills called Monte Selice, or the Euganean Hills, composed of porphyry and trap, which Fortis, in his work entitled Geologia del Vicentino, considers to have been formed by submarine volcanos.

The grand view of the chain of the Julian Alps is seen also from the northern quay, called the Fondamento Novo.

From the east end of Saint Mark's Place are seen a number of buildings of different ages;—Saint Mark's church, with round arches and low cupolas, of the beginning of the eleventh century;—the Campanile, of the twelfth;—the ducal palace, with pointed arched windows, and the walls chequered with red and white marble, of the thirteenth or fourteenth;—the torre del orlogio and the procuratorie vecchie, with round arches, of the end of the fifteenth;—the library of Saint Mark, highly decorated with sculpture by Sansovino, of the beginning of the sixteenth;—the procuratorie nuove, nearly in the same style, and built in the seventeenth century;—and if the spectator goes a few paces towards the gra-

nite columns, he has a view of the church of San Giorgio Maggiore, by Palladio,* built in 1560.

The paintings of different views in Venice, with the principal buildings, canals, &c. by Antonio Canal, commonly called Canaletto, † are excellent for the truth of the linear perspective and colouring,

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* The following are the names and the years of some of the principal architects whose fabrics are seen in Venice:

Niccolo Pisano, flourished in 1230. Built the church of Saint Anthony at Padua, and the Frari at Venice.

Sansovino, (Jacopo Tatti,) flourished in 1510. Built the mint, the library of Saint Mark, &c.

Tullio Lombardo, flourished in 1516. Built some churches in Venice.

Santi Lombardo, his son. Built the hall of Saint Rocq.

Serlio, flourished in 1534. Constructed the ceiling of Saint Mark's library, and some churches.

Palladio, flourished in 1550. Designed several churches in Venice.

Scamozzi, flourished in 1580. Built part of the procuratorie nuove, &c.

Antonio da Ponte, flourished in 1590. Built the Rialto bridge, the prison.

Baldassar Longhena, flourished in 1630. Built the church of la Salute, &c

Domenico Rossi, in the eighteenth century. Constructed the front of the Jesuits' church.

† Antonio Canal was born in 1697, and died in 1768. Bernardo Belloti Canaletto, the pupil of his uncle Antonio, painted views of Venice in the same style, and etched. He was born at Venice in 1724, and died at Warsaw in 1780.

and contain representations of the old Venetian festivals. These pictures are seen in many of the first collections in Europe, and engravings from them are commonly to be met with in Venice.

Pictures, Statues, Architecture, &c. of some of the Principal Churches in Venice.

Churches of the period from the Eleventh to the Fifteenth Century.

Saint Mark's church, as before mentioned, was built in the beginning of the eleventh century.

The church of La Carita was first consecrated in 1177.

The Frari, in the pointed-arched Gothic style, and one of the largest churches in the city, was built about 1234, by Niccolo Pisano, the same architect who erected the church of Saint Anthony at Padua. This church contains the tomb of the great painter Titian, who died in 1576, at the age of 99, and some large monuments, erected in memory of Doges.

In the large church of the Servi di Maria, built in 1316, is the tomb of Santorio, and of Fra Paola Sarpi, theologian to the republic. *

* Fra Paolo Sarpi was born in 1552. He was a Servite monk, and for supporting the rights of the Venetians in their

In another church is a monument in memory of Rosalba Carriera, from whose pencil many portraits in crayons are seen in the collections in various parts of Europe. She was born in Venice in 1672, and died in 1757.

Santi Giovanni e Paolo is a large church, with some pointed arched Gothic, built in 1430. The interior produces a grand effect. It contains the celebrated great picture by Titian, representing the Assassination of San Pietro Domenicano.*

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disputes with the Pope, he was excommunicated by Paul V. Borghese. In Fra Paolo's History of the Council of Trent, he exposes the intrigues of the court of Rome, who attempted to refute the work of Fra Paolo by the publication of Cardinal Palavicini's history of that council. Fra Paolo was thought to be inclined to the opinions of Calvin.

* This picture of the Assasination of San Pietro Domenicano, considered to be the finest of Titian's compositions, is returned to its former place in this church, after having been in the Louvre during Bonaparte's reign. It was originally painted on board, but was transferred to canvas in Paris The frigate, in which it was conveyed from Venice to Marseilles, met with tempestuous weather; the box containing the picture got wet, the damp penetrated to the board and the size ground of the picture, and when the picture was taken out, and put in a dry place, the painting, not being capable of contracting so rapidly as the ground, cracked into a multitude of scales.

The reparation of the picture was performed by Hacquin, under the inspection of a committee of the Institute, composed of four men eminent in their professions, the chemists Ber-

There are other good pictures, and many monuments of Doges, and eminent persons. On the piazza, or square, in front of the church, is the bronze

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thollet and Guiton, and the painters Vincent and Taunay, from whose report the following account of the process is taken.

Gauze was pasted on the surface of the picture; and this being dry, another gauze, and then two layers of grey paper, were pasted on. When these were dry, the picture was fixed with the face downwards on a table, and the wood taken off, first with two small saws, one acting perpendicularly, the other in a horizontal direction. Then with a plane, having an iron with a convex face, and applied in such a way as to take off very short shavings. Next with a plane having a straight faced iron with teeth, producing the effect of a rasp. After this the wood that remained was no thicker than a sheet of paper.

The wood was then moistened with water, in small portions at a time, and taken off with the point of a knife.

The distemper or size ground was then removed, by means of water, and the back of the painting was exposed to view.

To restore some flexibility to the painting, much dried with age, it was rubbed over with cotton dipt in oil, and then wiped with a muslin rag. It was afterwards painted over with white lead and oil, in place of the former distemper ground.

In this state, the picture was allowed to dry for three months, and gauze was pasted on the ground, and on the gauze canvas was pasted.

When these were dry, the picture was detached from the table, and turned with the face uppermost, and the grey paper taken off by means of water. Then, in order to bring the picture to an even surface, diluted flour paste was applied up-

equestrian statue by Verrocchio, representing Colleone of Bergamo, commander of the troops of the republic, who died in 1475. Four other equestrian

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on the scales of the painting, an oiled paper was laid on the moistened part, and a heated iron cautiously applied. In this way, the scales were rendered flat.

It remained to fix the picture upon canvas. For this purpose grey paper was again pasted on the face of the picture. The gauze was taken off from its back, another coat of white-lead and oil was applied on the back, and over this a flexible gauze, then a coat of white lead and oil, then a canvas woven all of one piece, and coated exteriorly with a resinous mixture, by which the large surface was carefully made to adhere in every part, to a similar canvas stretched on a frame. The grey paper was taken off from the surface of the picture before applying it on the frame.

After this the picture was put into the hands of a painter skilled in the restoration of pictures, to receive the repairs that he judged necessary.

Raphael's Virgin, with the portrait of the Donor, Conti, the chamberlain of Julius II, which was taken from the church of the Nuns of Saint Ann at Foligno, and is now in the Vatican, was restored in Paris by the same process.

The picture, on a board of soft white wood, was so ruinous at the time of its being sent to France, that it was found necessary to paste gauze over the surface, to preserve it during the transit. It was worm-eaten,—some of the painting had scaled off,—and there was a considerable crack in the board, which was warped into a curved surface. To remedy this crack, before proceeding to the other steps of the reparation, the following method was employed: A gauze was pasted on the face of the picture. The picture was pla-

statues of commanders of the troops are within the church.

San Zaccaria, a grand and spacious church, built in 1457, contains a fine picture of the Virgin and Child, represented under a mosaic niche, with Saints, painted, in 1505, by Giovanni Bellino, the master of Titian.

The church of Saint Giobbe, built at the expence of the Doge Moro about 1470, contains pictures by Giovanni Bellino, Paris Bordone, &c.

Churches of the beginning of the Sixteenth Century, by Serlio, Sansovino, Tullio Lombardo, &c.

The interior of the church of San Salvatore is adorned in an agreeable style, with composite columns and arches, and was finished in 1534. It was

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ced with the face downwards. Furrows were made in the wood at some distance from each other, and near the crack. Into these furrows small wedges of wood were introduced. The whole surface of the wood was covered with wet cloths frequently renewed, by this means the wedges were dilated, and forced the wood to resume its ancient form. The two edges of the crack came together, and glue was inserted between them. Cross bars of oak were applied to retain the board in its position during the time of drying. The rest of the reparation was performed in the manner already described.—See Notice de Plusieurs Precieux Tableaux Recueillis à Venise, &c. published at Paris in 1802.

built by Tullio Lombardo, with the assistance of Sansovino. Scamozzi was afterwards employed in making additions to the church. The front was erected in 1663, after a design of Longhena. This church contains two fine pictures by Titian, the Transfiguration and the Annunciation;—the Supper at Emaus, by Giovanni Bellino, &c.;—tombs of Doges of the family of Cornaro, and of Doges of the family Veniero. On one of the latter are well designed statues of Hope and Faith, by Sansovino.

The church of Saint Sebastian was built in 1506 by Serlio. The front is by Sansovino. The interior is adorned with pictures by Paul Veronese. The tomb of that excellent painter is in this church; he died in 1588.

San Giorgio dei Greci is a church of moderate size, built by Sansovino. The front is adorned with mosaic, and the interior with pictures of saints, on a gilded ground, in the middle-aged Greek style. The Greeks obtained permission to erect this church from Leo X. in 1514.

Churches built after designs of Palladio, in the Sixteenth Century.

Most of Palladio's churches in Venice have the front decorated with a pediment supported by columns, and between the columns statues in niches. Statues are also placed on the top and angles of the pediment.

The church of San Giorgio Maggiore, after a design of Palladio, was begun in 1556, and completed in 1610. The front is of Istrian marble. In the church is a portrait of the reigning Pope Pius VII., who was consecrated pope in this church in 1800. The adjoining buildings, formerly a monastery, are now occupied as the customhouse, Dogana di Mare. In the dining hall of this monastery was the great picture of the Marriage Feast at Cana, which was taken to Paris, and still decorates the saloon of the Louvre gallery.

The church of San Francesco della Vigna was begun in 1534. The front is by Palladio, of Istrian marble, and adorned with composite columns. The rest of the church is by Sansovino. In this church are pictures by Giovanni Bellino, and other esteemed masters, and monuments of doges, procurators of state, senators, &c. The adjoining buildings, formerly a monastery, are now occupied as soldiers' barracks. On one side of the piazza, which is before the church, is the palace formerly inhabited by the pope's nuncio, and now by the consul of the pope, by whom it is necessary for travellers proceeding from Venice to Rome to have their passports signed.

The front of the church of il Redentore is of marble, with Corinthian columns, after a design of Palladio. This church was erected in consequence of a vow made by the senate during the plague that afflicted Venice in 1576.

The atrium and cloister of the convent della Carita, * the small church of the Zitelle, and the church of Saints Gervasio and Protasio, commonly called San Trovaso, were built after designs of Palladio.

Churches of the end of the Sixteenth Century.

The church of la Celestia was built in 1580 by Scamozzi.

In the church of San Lorenzo, rebuilt after the design of Sorella in 1590, is the tomb of Nicolo Polo the Venetian traveller. †

Churches built in the Seventeenth and Eighteenth Centuries.

The church of San Pietro di Castello was the seat of the patriarch. It is large, and the interior

* See a design of the atrium and cloister in the Architettura di Palladio. Ven. 1642

† Marco Polo, about the year 1270, accompanied his father Nicolo and his uncle, who traded in precious stones, to the court of Kublai, the Grand Khan of the Tartars, Emperor of the Moguls and of China, and sixth in succession from Gengis Khan. In the dominions of Kublai Khan they passed twenty-seven years. Marco Polo's account of his travels is in Ramusio's collection, published at Venice, by Tomaso Giunti in 1559; and with notes by Muller, Berlin, 1675.—See Tiraboschi st. d. l. It.

produces a noble effect. It was begun in 1621, and completed in 1680, after the design of Grapiglia.

The church of Santa Maria della Salute was built in 1631 by the Venetian architect Baldassar Longhena, in consequence of a vow made by the senate whilst the city was afflicted by the plague in 1630. It has two handsome cupolas, and is one of the most considerable buildings of the seventeenth century in Venice. At the high altar are four large columns of Marino Greco, brought from Pola in Istria, the remains of a Roman edifice demolished by the engineer employed in building the fortifications of that place in the seventeenth century.* Whilst I was at Venice in December, a great annual festival was celebrated in this church. In the procession there walked the members of a fraternity, dressed in white cloaks, with a hood that entirely covers the face, leaving two holes for the eyes, so that the persons cannot be known, one of them bearing a large and heavy cross. These fraternities are instituted for charitable purposes, attending criminals to execution, carrying the sick to the hospital, &c.; the members are tradesmen in Venice, and sometime persons of the middle and higher classes. They exercise the functions of the fraternity gratuitously, and from motives of devotion. Some of these so-

* Maffei, Veron. Illus. parte quarta.

cieties are composed of females. On occasion of this festival there was a bridge of boats constructed across the great canal, and terminating on the quay before the church.

The front of the church of Santa Giustina was built in 1640, after the design of Longhena.

The church of the hospital of mendicants was built in 1673.

The church of the Gesuati, * built by Masari after the suppression of the order, is adorned internally with red Sicilian brocatello marble, and contains the tomb of Apostolo Zeno, who left his library to the monastery that formerly existed near the church. †

Santa Maria Formosa was built in the end of the seventeenth century.

The church of the Jesuits was built in the beginning of the eighteenth century. ‡ It is large and

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* This order is different from the order of Jesuits. It was suppressed in 1669.

† Apostolo Zeno, of a Venetian family settled in Candia, was born in 1669. He was poet and historiographer to the Emperor at Vienna, where he composed a great number of dramatic poems for musical operas and for azioni sacri, or oratorios. His successor at Vienna was the celebrated dramatic poet Metastasio. Zeno wrote also on antiquities, of which he was a good judge,—on the Italian historical writers,—letters, &c. He died at Venice in 1750

‡ In 1773 the order of Jesuits was suppressed.

highly decorated. The front is by Domenico Rossi. Within the church, the columns and walls, and the pavement, are covered with Carrara marble curiously inlaid with verde antico in the form of foliage. The pulpit is adorned with a drapery in marble, inlaid in the same way, and representing damask. The church contains the picture of the Martyrdom of San Lorenzo by Titian;—the Presentation in the Temple by Giac. Tintoretto, &c. Amongst other tombs is that of the Doge Cicogna, whose reign ended in 1595, and under whose government the bridge of the Rialto, the prison, the fondamento nuovo, or quay on the north side of the city, and other public works, were constructed.

The front of the church of the Scalzi, or barefooted Carmelites, is of Istrian marble, and is highly decorated; it was designed by Sardi in the eighteenth century. The interior of the church is ornamented in the richest manner with brilliant coloured marbles, Rosso di Francia, * of which the spiraly twisted co-

* The marble called in Italy Rosso di Francia and Breccia Corallina, is the red marble of Campan in the Pyrenees It is bright-red with white spots There is another marble from Campan with green veins, called in France Verd de Campan. These Campan marbles are seen on the exterior of the palace of Trianon near Versailles,—in the columns of Bonaparte's arch in the Place du Carousel,—in the interior of the church of Saint Sulpice, and in other buildings in Paris.

The Campan marble, however, is not the most common

lumns at the high altar are formed,—breccia Africana, and others. Pietra di paragone, or black touchstone, occurs in this and other churches and palaces in Venice, in slabs of considerable size; it is distinguished from black marble by its hardness.

In the churches in Venice and some other towns in Italy, columns are incrusted on the surface with pieces of the finer kinds of marble, fitted together so as to appear like a column of solid marble. Most of the columns of solid marble or granite, in Italy, formed the decoration of ancient buildings, and by far the greatest number of these columns is at Rome.

San Simion Piccolo is round, with a dome, and a portico supported by columns. It is, in some respects, an imitation of the pantheon at Rome, but being much smaller produces a very different effect. The grandeur of the pantheon cannot be conveyed to the spectator by a copy on a smaller scale. San Simion Piccolo was built in 1718, after the design of Scalfarotto.

The Scuola di San Rocco is the hall of one of the six *scuole grandi*, or great fraternities,* which are

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marble in Paris. The slabs on the top of stoves and of furniture, and the marble tables so much used in Paris, are made of marble from Flanders, some of which is black and white, and some of a dull red.

* These six fraternities are seen in the procession of Corpus Christi day, (the fete Dieu,) painted by Canaletto.

now suppressed. It was built in 1516 by Santi Lombardo, the son of Tullio Lombardo, and is remarkable for the beauty of the building, the internal decorations, and the pictures of Tintorett it contains. This is the only one of the six scuole grandi that has been kept in repair after the suppression of the fraternities, which happened in 1797, at the extinction of the Venetian government.

In the churches and palaces of Venice are seen pictures by Giovanni Bellino, Titian, Paul Veronese, Giacomo Tintoretto, Domenico Tintoretto, Palma the elder, Palma the younger, Bassano, Paris Bordone, Sebastian del Piombo, Giorgione.*

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* The periods at which some of the principal painters, born in Venice and the Venetian dominions, lived, are as follows.

Gentil Bellino, -	born in 1419	died in 1501.
Giovanni Bellino, - -	1426,	1514.
Titian, - -	1477,	1576.
Barbarelli, called Giorgione, -	1478,	1511.
Sebastian del Piombo. - -	1485,	1547.
Giovanni da Udine, pupil of Raphael,	1491,	1564.
Paris Bordone, - -	1500,	1570.
Giacomo Robusti, called Tintoretto,	1512,	1594.
Domenico Tintoretto, son of Giacomo,		1637.
Paul Veronese, - -	1532,	1588.
Palma the elder, - -	1540,	1588.
Giacomo da Ponte, called Bassano,	1510,	1592.
Francisco da Bassano and Leandro, sons of Giacomo.		
Palma the younger, - -	1544,	1628.

Each of these painters is distinguished by a particular style; the pictures by Giovanni Bellino, the master of *Titian*, are in that old and rather formal manner which prevailed before Raphael came to eminence. The Virgin seated on a Throne, under a tribuna or niche, with the Child and Saints, is a subject frequently painted by Bellino; the figures have a serious and dignified expression.

Titian was much employed in portraits, and drew most of the princes and distinguished personages of his time. Charles V. sat to him several times; for which purpose Titian went twice to Bologna, once to Piedmont, and twice to Augsburg. Amongst the excellencies of Titian's pictures, which entitle him to rank with the three or four greatest painters that have appeared since the revival of the arts, are the beautiful landscapes he introduces as accessories to his compositions.

The pictures of Paul Veronese are magnificent in the dresses and architecture, which are expressed with excellent colouring and knowledge of direct and reflected light and of linear perspective.

The academy of painting, called the Scuola delle Belle Arti, is a modern institution, situated in the buildings formerly occupied by the Scuola di Santa Maria della Carita, the oldest of the six scuole grandi, or great fraternities. Many valuable pictures and other productions of art are collected in this institution. Amongst them are;

The Assumption of the Virgin, by Titian, which has been restored to brilliancy from a state of almost total blackness. It was brought from the church of the Frari.—The Presentation in the Temple, by Titian, a large oblong picture.—The Virgin presenting the Child to the aged Simeon, by Carpaccio.—Adam and Eve, by Giacomo Tintorett.—Saint Mark descending from heaven to liberate a slave from the hands of the Turks, by Giacomo Tintorett. This picture was in Paris as well as others in this collection.*—Pictures by the old Venetian

* The greatest number of the pictures and productions of art taken by the French from Venice and the Venetian terra firma were returned, according to the treaty with the Allied Sovereigns, some manuscripts, however, from Padua, remain in the collections in Paris on account of their not having been claimed, and one masterpiece, which formerly adorned the dining-hall of the Benedictine monastery of San Giorgio Maggiore at Venice, Paul Veronese's splendid picture of the Marriage Feast at Cana, still (June 1818) decorates the great saloon of the Louvre. On account of its extraordinary size the picture might be exposed to injury in the carriage, it does not appear what other motives there were for allowing it to remain. The administration of the Louvre gallery sent a picture by le Brun in place of this great work.

Paul Veronese's Feast of Cana was the most considerable of the four feasts painted by him for the dining-halls of the monasteries of San Giorgio Maggiore, San Giovanni e Paolo, San Sebastian, &c. at Venice. It contains portraits of Charles V., Francis I., Titian, Tintoretto, &c.

masters Catena and Antonio di Murano, by Bonifacio in 1562, &c.—The seated statue of Polyhymnia, by Canova.—Bronze sculptures in relief, by Donatello.

The houses in Venice are generally of brick plastered over. The Istrian marble with which the fronts of palaces, churches, and other public buildings, are encrusted, is a small-grained limestone of a dull white colour, which is brought to Venice in blocks of a large size. It is susceptible of polish, although not polished when used in the exterior of buildings, but is not to be ranked amongst the finer marbles by reason of its dull colour.

The floors of rooms are almost all of them of plaster, composed of lime coloured red by the admixture of brick-dust, with fragments of black and of white marble stuck into it; the whole is brought to a shin-

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All these four feasts were in the Louvre during the reign of Bonaparte, and two are still in that collection, one of them having been given to Louis XIV. by the Venetian Republic in 1665.

Repasts were often the subject of the pictures in the dining-halls of large and wealthy monasteries. The Last Supper, in the hall of the monastery of Madonna delle Grazie at Milan, painted by Leonardo da Vinci, 80 years before the time that Paul Veronese flourished, comes under this description, and is celebrated for the grave and solemn character of the figures, and the simplicity of the accessory parts.

ing polish.* In most other parts of Italy the floors are usually laid with rectangular flat tile.

The foundations in Venice are constructed upon piles with much solidity, few cracks or deviations from the perpendicular being seen in the buildings.

On the great canal, which has a winding course between the two principal parts of the city, are situated the most magnificent of the great houses, or palaces as they are termed; some of them are in an agreeable style of architecture, with fronts of Istrian marble, and contain valuable collections of pictures.†

In the palace of the Grimani family there are antique inscriptions, and some antique statues disposed in the court. One of them is a statue, larger than life, of Marcus Agrippa, brought from the portico of the pantheon at Rome, when that edifice was first used as a church.—Portraits, by Titian, &c. of individuals of the Grimani family, several of whom were patriarchs of Aquileia, and ecclesiastical primates of the Venetian state.—Ceilings painted in fresco, by Giovanni da Udine, in the manner of some of the Chinese paper hangings, representing arbours of overhanging and entwined branches of vines, In-

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* Architettura di Palladio, Cap. XXII. de' pavementi, e de' soffittati.

† Views of the palaces and churches of Venice are published in *Grævii Thesaurus Antiquitatum et Historiarum Italiæ, Tom. V.* printed at Leyden in 1722.

dian corn, reeds, and various plants, with herons, hawks, owls, magpies, and other birds flying and perched: Similar designs occur in the loggie of the Vatican, painted by the same artist, under the direction of Raphael.—The architrave and jams of a chimney, all three of one piece of black touchstone, pietra de paragone; and a slab of the same material forming a table five feet in diameter.

In the palace of the Pisani family,—the picture of the family of Darius, by Paul Veronese, &c.

In the palace of the Barbarigo family,—Magdalen by Titian.—Nymph and Satyr, by Titian, and others by the same master.—A Child fixed to the Cross, by Padouanino.

In the palace di Casa Manferino,—the Ages of Man, by Titian.—The Body of Christ carried to the Sepulchre, a capital picture, by Titian; the French had spared the private collections, at least when the proprietors were inclined to their party, and did not take this picture.—The Last Supper, a fine picture, by Giov. Bellino.—A Magdalene, by Corregio.—Cartoon of Noah and his Family, with the animals entering the ark, by Raphael; the picture from this is in the loggie of the Vatican.—Landscape by Tempesta.

In the palace of the Casa Albricci,—a Hebe, by Canova, and casts of Canova's bas reliefs of subjects from Homer.

In the possession of Madame Albricci, who is author of a good account of Canova's statues, is the bust of Helen, by Canova.

The palace of the Cornaro family at San Maurizio on the great canal was built by Sansovino. This palace being occupied by some of the public offices of the Austrian government, was accidentally burnt in December 1817, whilst I was at Venice. The walls were strongly built, and had not fallen in, although the fire had consumed the interior of the fabric.

The French formed public walks in several of the cities in Italy, after the model of the gardens of the Tuilleries and of the Luxembourg; and at Venice the ground formerly occupied by the monastery of Sant Antonio, was laid out by them with alleys of trees, and is still resorted to as a public walk. This garden forms the south-east point of the city, and commands a view of some of the islands in the laguna, and of the sand islands that bound the laguna.

The botanic-garden, formerly the garden of the monastery of *San Giobbe*, possesses no great collection of plants. The hot-house has a roof projecting some way forwards to protect the glass from hail, like the hot-houses at Shoenbrun. There are mats* on the outside which are rolled up,

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* These are not the mats of bast or lime tree bark used in our gardens in England; they are that kind of mat called stuoja, made of a species of stipa, which grows near Venice; and are much used at Trieste, Venice, and in other parts of Italy, for covering waggons, the floors of rooms, &c.

and at night are let down before the glass. The house is heated in the usual way by flues at this season, (December,) as it freezes every night. There is another small botanic-garden belonging to a gentleman who cultivates that science.

The professor of mineralogy at the lyceum has a collection in which there are good specimens of crystallized sapphirs, spinell, and hyacinth. Signor Parolini of Bassano, who sometimes resides in Venice, possesses a good collection of minerals, which comprehends a part of the collection of the late Parisian mineralogist Delametherie.

It was rather cold in Venice in the end of November and beginning of December 1817, so that fires were used in rooms. There was generally frost at night. The wood fires in rooms are made in open chimneys. Stoves are not used. The cold is sometimes so severe that part of the laguna is frozen over. This happened in 1788, and passengers went on the ice from Venice to the main land at Mestre.

There are many conversazione where company is received in the evening, and foreigners introduced at these conversazione are treated with polite attention by the lady of the house who presides.

Saint Mark's Place is the centre of public resort, and in this respect, as well as in its form, bears a resemblance to the Palais Royal in Paris, but with less bustle and brilliancy, in proportion as Venice is

smaller, containing only one-sixth of the population of Paris. The merchants hold their exchange on one side of the place of Saint Mark. A great part of the ground floor under the covered walk, or peristyle, is occupied by neat coffeehouses, which, in the evening, are crowded with persons who come to pass the time, and to converse with their acquaintances; some ladies are seen accompanied by their male friends; bands of singers go about from one coffeehouse to another to amuse the company; each band is composed of two or three tolerable male and female singers, accompanying their song on the guitar. In Rome the coffeehouses are on a different footing, being dirty, and not so much frequented by genteel people as at Venice.

The young women in Venice wear a veil of white muslin becomingly thrown over the head and shoulders, something like the veils of the young persons in Paris when receiving their first communion.

The theatres at Venice, in November 1817, were three in number: An opera, neither to be praised for the performers nor the appearance of the house.—A neat theatre, where a good company of comedians, directed by Vestris, performed. Vestris himself is a good actor in ludicrous and caricatured parts.—The third was a theatre for inferior comedies, in which Harlequin, otherwise called Trufaldino, is always

prominent; he is a kind of knave full of jest, represented as a native of Bergamo, and speaking the Bergamasque dialect. The dumb Harlequin of our pantomimes, originally borrowed from the Italians, has now little resemblance, except in dress, to the Italian Harlequin, of whose province leaping is not a part. Quadrio, in his Storia della Poesia, gives an account of the origin of the four masked characters in the Italian farces, *Arlechino, Pantalone, il Dottore* a scholastic pedant, and *Brighella.*

One of the burlesque personages sometimes introduced on the Italian stage is *Tartaglia*, or the stutterer. They play caricatures of the different nations of Italy. In the north of Italy the Neapolitan is represented on the stage as a boaster and coward, something like the Gascon in France, but with less courage.

In the time of the carnival, performances are given in the theatre *del Phenice*, which is the handsomest theatre in Venice, with an agreeable architectural front, and was built in 1791.

The hours of performance at the theatre, and the hours of seeing company at the conversazione, are late. Very different from the early hours at Vienna, where the theatrical performances are over by nine in the evening, in Venice they finish about midnight, and after the play people go to the conversazione.

The inn *La Grande Bretagne* occupies a handsome building, formerly a palace, on the great canal,

near the Rialto bridge. The inn called *La Regina d'Ingilterra* is pretty well regulated: a printed list of the prices of the rooms, &c. is fixed up in the entrance hall.

Few of the English who visit Italy for amusement or curiosity pass any considerable time at Venice; Florence, Rome, and Naples, are the cities which detain them most.

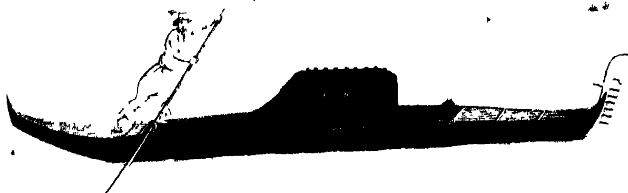
The bridge of the Rialto is the only bridge over the great canal. It is of marble, and of one large arch; and, like the other smaller bridges in Venice, the way over it consists of a stair which the passenger ascends on one side and descends on the other. The span is about eighty feet. As there are no carriages, the bridge has no great weight or shake to sustain. It was built in 1591, as appears from the inscription. The architect was Antonio da Ponte. Formerly there was a wooden bridge in this place. Vasari, in his life of Friar Giocondo of Verona, speaks contemptuously of the present bridge, and praises the design presented by the friar, which was not accepted. Many of the bridges over the other canals are without parapets.

The French made one broad street near the public garden of Sant Antonio, by arching over a canal; but this was only for shew and ornament, and not a matter of use. There being no carriages nor beasts of burden in Venice, broad streets are not necessary. The communication, therefore, by land is effected by means of narrow streets, or rather lanes,

called *Calle*, which are about eight feet broad, and serve for foot passengers. These lanes are paved with cubical pieces of trap-porphyry, whose upper surface is about a foot square, from Monte Selici, near Padua.

There are canals that penetrate to most parts of the town, so that almost every house has a communication with a canal, by a landing stair, which is frequently the threshold of the principal entrance to the house. The place of coaches is supplied by gondolas, which are light skiffs thirty-five feet long, and six feet broad at midship, without any keel, drawing very little water,—having a cabin in which four or five persons can sit, covered and furnished with a door, and plate glass windows, like the windows of a coach. This box or cabin is covered on the outside with black cloth and black tassels, like the furniture of a mourning coach in England, and the rest of the gondola is also black. In the time of the republic, a sumptuary law ordered that the gondolas should be of no other colour, with the intention of preventing expence in painted and gilded ornaments. The gondola is rowed by one man standing near the stern, with a single oar, which he pushes, moving the boat in the same direction as he looks. Other gondolas have two oars. The rowlock is a strong piece of wood rising a foot or eighteen inches above the gunwale, with two notches to receive the oar. There are numerous

Venetian Gondola; page 74 the ornament at the head is of polished Iron.



Antn Venezia del.

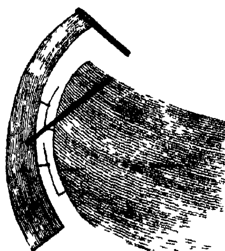
Transverse section in the middle



Rowlock of the Gondola on a larger scale



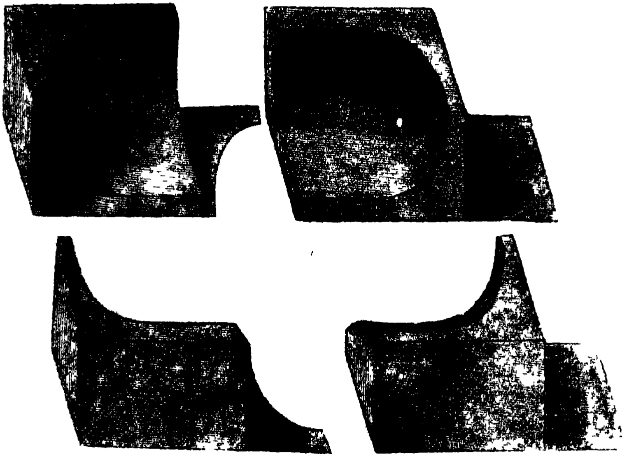
Rudder of large Carrying-barges at Venice



VIII.

[Page 75, Vol. I.]

Camel used for Floating large Ships of War out to Sea from the Laguna of Venice.



Drawn by W. A. C *Etched by Lizars*

gondolas to be hired as hackney coaches in other cities, and they wait at the door of the theatre in the evening.

The tide rises three or four feet in Venice, and occasions a considerable current in some of the channels of the laguna, and there were anciently tide mills near the island of San Georgio Maggiore. At low water, some of the small canals in the town are left dry. Sometimes the high water rises so as to cover the eastern part of Saint Mark's Place; as I saw in November 1817.

The arsenal, inclosed with a high wall, includes slips for building ships, mast-houses, a long building for making ropes in, a foundery for brass cannon, an armoury, and other establishments. The ships are built under a roof, a practice which has been adopted within these few years in the English dock-yards, and is found very advantageous in protecting the timber from the injurious action of the rain, and of the sun's rays. The camel for floating large ships of war out of the laguna consists of four pieces, which have a concave surface that fits close to the convexity of the sides and bottom of the ship, and the four pieces are then joined together; when the camel thus embraces the ship, the water in the cavities of the camel is pumped out, it becomes buoyant, and floats the ship. Bonaparte had several seventy-four gun ships and

frigates built at this arsenal of Venice. At this time, in November 1817, there are no ships building, and few men employed in the yard. There are some thirty-six pounder cast-iron guns and large carronades, cast at Ruelle near Paris, and at Nevers, as appears from the inscriptions on the trunnions. The keeper said that some iron guns had been cast at the iron-works at Brescia. In the armoury is an ancient howitzer, made of rope gaskins covered with leather. At the gate of the arsenal are some large antique figures of lions, rudely sculptured in marble. They were brought from Greece when the Venetian republic possessed territory in that country. On one of them is an inscription in very ancient and unknown letters, called by some authors Pelasgic, and concerning which Akerblad and others have written.

Natural Productions.

Foléga (Fulica, Lat.) and Mazorini are two kinds of scollop-footed water fowl, with black plumage, common in the markets in November; as are also wild-ducks, snipe, woodcock, red-legged partridge. I saw likewise one of the large birds called cock of the woods, the Tetrao urogallus, killed in the Friuli Alps. This species of bird formerly existed in the mountains of Scotland, but has become extinct there. It is sometimes imported fresh from Norway to Lon-

don and Leith. Frogs are sold in the market in Venice.

The fish and other sea animals in the market of Venice are, the turbot, the soal, the flounder, the red mullet, the dory, called *pesce di San Pietro*, the skate, the red gurnard, a *sparus* called in Venice orade, the electric silurus, called *tremola*, the Lophius piscatorius;—oysters, the Solen siliqua or razor fish, Cardium edule called Tellina di mare, and some other shell fish,—a kind of cuttle fish called *polpi*,—gammari a kind of sea cray fish, white, nine inches long, and without large claws,—shrimps, &c. Various articles of food ready dressed are sold in the streets to the poorer class, such as gourd stewed, white turnips, polpi, polenta or hasty-pudding, made of the meal of Indian corn, and forming a large mass which is cut with a string. Gourd seeds, *seme della zucca*, are sold on the streets, and eaten by the poor.

The trees in the public walk are, the Platanus orientalis, Robinia pseudacacia, Bigonia catalpa, a tree which thrives near London, but does not bear the cold in the neighbourhood of Edinburgh, Melia azederach, a justicia, hornbeam, Hibiscus Syriacus formed into hedges. The Stipa palustris, which grows in the neighbourhood of Venice, is used for making mats called stuoje. A stipa is employed for making brushes for clothes, &c. The ruscus, or butcher's broom, is used for brooms, and for sweeping chimneys.

Fresh water for drinking is got from wells that

are supplied with the rain water, falling on the houses in their immediate vicinity. The well is placed in the court of the house, and in the earth round the well a great basin is formed, and moated with clay. This basin being filled with rubbish, and covered with the pavement, the rain water, which falls from the tiles of the roof, and that which falls immediately on the pavement, sinks into the rubbish, and cannot get deeper than the clay; it therefore flows to the bottom of the well, which is the lowest part of the basin. The surface of the water in these wells is from five to ten feet below the surface of the ground. Around the mouth of the well is a cylindrical parapet of one stone, such as the ancient Romans called puteal, which prevents the high tides from flowing into the well.* The pavement of the court is also elevated, to prevent as much as possible the sea-water from sinking through the interstices of the stones into the basin. Fresh water for the use of ships and of some parts of the town,

* Olivier de Serres, in his interesting old treatise *le Theatre d'Agriculture*, describes a similar mode of collecting rain water, practised in some parts of the south of France. It is also employed in situations where the nature of the strata is such as not to retain the rain water Near Castleton, and in other parts of Derbyshire, ponds are thus moated with clay, to collect the rain water for the use of men and cattle; without this precaution the rain water sinks, and is lost in the porous limestone beneath the soil.

is brought from the main land, by boats in large open tubs.

The theriac of Venice has long been, and still continues to be, in great repute. It is a medicine used internally, as an astringent, &c. It is described by some of the ancient Greek medical writers, and is composed of a great number of different vegetable drugs. Some of these are spices from the East Indies, of which Venice had formerly the monopoly. They were making theriac when I was at Venice in December. Thirty or forty porters in a row were seen daily pounding the ingredients with pestle and mortar, on the Rialto Bridge, before the shop of the apothecary. The ingredients are afterwards heated in large cauldrons; and this part of the operation also is performed on the public street. Mithridate, another medicament composed of a multitude of ingredients, is prepared in the same establishment. The leaf of the Laurus nobilis appears to be one of the ingredients of these medicaments, boat loads of these leaves being brought from Trieste. Both these medicines have been banished from the Pharmacopœias of Britain for a good many years, on account of the needless multiplicity of their ingredients, when the same effects may be obtained by the exhibition of some more simple preparation. The medical practice in many parts of the Continent of Europe employs various other drugs which are thought quite inefficacious by the English practitioner. The English medical practice is more ac-

tive, that of the French and Italians is *la medecine expectante,* they only watch the course of the disease.

The most frequent coins in common circulation in 1817, were pieces of very base silver, marked with the Austrian eagle, and with the inscription one and a half lira, others with one lira, others with one-half lira, denoting the value for which they had been issued; but most of these coins were depreciated, and only current for a smaller value than that which was stamped upon them. One lira is equal to half a franc, or in English money fivepence. One soldo is one-twentieth of a lira.

The coins of the Venetian republic are no longer seen in circulation at Venice. In most parts of the Austrian dominions, the common circulating medium is in a bad state. In Vienna, Bohemia, and Hungary, it is paper depreciated to one-third of its original value. In Venice, it is base silver. At Milan, the most convenient money in common circulation is that coined by Bonaparte, during the existence of his kingdom of Italy.

The lingua Veneziana, or Venetian dialect, is soft, having been preserved, by the insular situation, from intermixture with the language of the nations who overrun the mainland; whereas, the Bergamasque, and other dialects in the neighbourhood of the Venetian territory, are harsh-sounding.

Goldoni's comedy, *i Rusteghi,* is in the Venetian dialect, and many other printed comedies and poems.

Tasso's Gierusalemme liberata is translated into Venetian, and into several other provincial dialects of Italy, as Bergamasque, Bolognese, Milanese, Neapolitan.

The three last petitions of the Lord's prayer in Venetian, as given by Adelung, are,

E perdona i nostri debiti come anca nu perdonamo ai nostri debitori;

E no ghe indur in tentazion,

Ma libera ghe del cativo.

The only monastic community that remains in Venice, or indeed in the whole Lombardo-Venetian kingdom, is the Armenian monastery, which occupies the small island of *San Lazzero*, in the laguna and near the town. The monastery is neat, and the monks receive strangers, and show them the objects worthy of attention with great politeness. The monastery and its garden, with walks covered by an arched arbour or berceau of vines, occupy the whole island. A great dog serves to protect the garden from water thieves. The monastic community is now raising ground on the adjoining shallow to extend their garden. They educate a certain number of young Armenians. They print Armenian books. Amongst the books they have printed are, a French and Armenian Dictionary; an English Grammar, for the use of Armenians; an Italian Grammar for Armenians. They have some good English philosophical and astronomical instruments

for the instruction of their pupils. The monastery is much patronized by a wealthy Armenian merchant, who resides in London.

On the island of Murano, half a mile from Venice, are the glass-works, in which they manufacture window glass in small panes, flasks, tubes for making beads, and some plate-glass for mirrors. These works were first established in the thirteenth century. In the year 1800, the art of making glass mirrors was practised in Venice, and in no other part of Europe; but this manufactory of mirrors has now become inconsiderable in Venice, and is carried on to a greater extent in France,* and also in England, Vienna, &c. in which places mirrors can be made of a larger size than at Murano, being cast.

To form the tubes, from which the small beads are made, a lump of colourless glass, in a melted state, is taken on the end of the steel pipe, and this is plunged into coloured glass, likewise melted; a boy seizes a portion of this with pincers, and runs with it, drawing after him a thread of glass, which becomes smaller as he moves from the workman who holds the pipe; a very small tube is thus ob-

* The French mirrors are cast at Saint Gobin, in Picardy, and polished in the Faubourg Saint Antoine, in Paris. This extensive manufactory is carried on by government. It is the largest manufactory of mirrors in Europe, and mirrors are more frequently used for the furniture and ornament of rooms in Paris than in other places.

tained. These coloured tubes are broken into pieces of about a foot long, and sent to the bead manufactories in the town. To break them into the size of the beads, a bunch of tubes, all of the same length and colour, is held by a workman, with the part to be cut resting on an iron edge; he strikes them with an iron chisel, so that a piece about an eighth of an inch long is separated from the end of each tube, and falls into a bag. This operation is repeated till the whole are cut into small pieces. These pieces must then undergo an operation to round off their edges. This is done, by putting them into a copper pan with sand; the pan has a long handle, by means of which it is held exposed over a flame in an open oven, and shaken continually. The heat is such as only to fuse the edges, without altering the form of the bead, and the sand prevents their coherence. The operation of the fire being finished, the beads are separated from the sand by means of a sieve, and they come out of this process with the edges rounded by fusion. These beads are of a cylindrical form, and are called *piccoli perletti*. The smallest of them are strung by women and children, who place a quantity of the beads in a saucer, and push amongst them repeatedly a bristle fixed on the end of a slender silk thread; some beads get upon the bristle each time. For stringing the larger beads, a small wire is fixed at the end of the thread. With these

small beads of different colours, purses, bags, watch chains, and other articles are embroidered.

Beads of enamel, of a larger size than the glass beads just spoken of, are made at Venice by the enameller's lamp. A small pair of smith's bellows supplies air to several lamps. Some of these beads have the colour of metallic copper, which is produced by metallic copper introduced into the enamel, and heated, and exposed in a particular way to the flame of the lamp. This metallic copper colour is the same as is seen on some old Italian earthenware; and it has also come into use within these few years on English stoneware.

The practice of burying in churches has been relinquished for some years, and the burying ground of Venice now occupies the small island of San Cristofero, situated in the Laguna, between Venice and Murano. *

The burying-ground of the Jews, on the sandy

* This salutary practice, of burying out of the city, which tends to lessen the quantity of putrid effluvia, too abundant in crowded towns, was introduced by the French. There have been no burials for the last twenty-five years within the city of Paris, with a very few exceptions of senators in the church of Sainte Genevieve, the cemeteries are at Mont Martre, &c The dead are still buried in the most populous parts of London and Westminster; new church-yards, however, have been formed of late years, removed from the crowded parts, and in the vicinity of the town.

island of Lido, is covered with tombstones bearing Hebrew epitaphs. The Jews in Venice, as in other towns of Italy, inhabit a particular part of the city, called *Ghetto degli Hebrei*, the Jewry.

The burying-ground of the Protestants is within one of the bastions of the fortress of Lido. It contains several tombs of English. Amongst the rest, that of the British consul, Smith, known as a collector and encourager of the arts. There are also some tombs erected in memory of Germans.

The islands of Torcello, Burano, Mazorbo, and Murano, lie in the Laguna, to the north-east of Venice. Torcello is five miles distant, and was peopled by emigrants from the ancient city of Altinum, who fled from Attila. Torcello was the seat of a bishop, and Burano, Mazorbo, and Murano, were subject to it. It was a considerable town, but is now diminished in population, by reason of the situation having become unhealthy. The cathedral of Torcello was built in the eleventh century; and, according to the printed descriptions, contains some columns of Greek marble, and other remains of antiquities. Opposite the cathedral is the Baptisterium. Mazorbo is inhabited by fishermen and a few gardeners. Near Torcello, some islands, formerly inhabited, are now washed away by the sea.

CHAPTER III.

Venice to Padua.—PADUA;—Church of Saint Anthony; Hall of Justice; University; Galileo, &c., Botanic Garden.—Gustavus Adolphus.—Davila.—Petrarch.—Dialect.—Mode of Travelling.—VICENZA.—Buildings by Palladio.—Minerals.—VERONA.—Old Bastions.—Amphitheatre.—Cathedral.—Fracastoro, &c.—Castle Bridge.—Attila.—Verona to Mantua.—MANTUA.—Edifices.—Palazzo del T.—Julio Romano.—Mantua to Modena.—MODENA.—Palace.—Muratori.—Guicciardini.—Wells.—Modena to Bologna.—BOLOGNA.—University.—Aldrovandi, &c.—Botanic Garden.—Agricultural Implements.—Painters of Bologna.—Church of San Petronio.—Cassini.—Church of the Madonna di San Luca, &c.—Building Materials, &c.—View from the Asinelli Tower.—Operas.—Dialect.

THE passage-boat from Venice to Padua is towed by a boat with oars across the Laguna to Fusina. At Fusina there are several carriages waiting, in which places may be taken by those who wish to go the rest of the journey to Padua by land. Fusina is at the mouth of a canal communicating with the Brenta, and along this canal the boat proceeds, and is drawn by horses. The boat, which is conveniently laid out for passengers, leaves Venice in the morning, and arrives at Padua in the evening. The distance is thirty English miles. The fare is of the cheapest, as low as in our modern steam-boats. A travelling

cook comes aboard with a box containing a small charcoal furnace, and the whole apparatus and provisions for dinner, and furnishes the passengers with rice soup, and a few other dishes, and wine.

The canal from Fusina to Dolo is bordered, uninterruptedly, with populous villages, and with villas of handsome architecture, some by Palladio, and many of them in a neglected state; the fabrics and habitations of Venetian nobles in the flourishing times of the republic. At Dolo, after passing through three locks, and thereby getting into a higher level, the boat enters the broad channel of the Brenta, some way above the place where there is a bridge of masonry of several arches. After this, at Stra, we pass a large palace belonging to the Emperor, and at Stra is another bridge over the Brenta. The river is confined between embankments.

Padua is mentioned by Strabo as one of the most considerable cities of Italy in his time.

Over the gate is seen the defaced figure of the Venetian lion.* Many of the public buildings are in imitation of those of Venice.

The interior of the large church of Saint Anthony is majestic; it is in the pointed-arched style, and was begun in 1255 by the architect Nic-

* The Venetian lion is the winged cherubim, with a lion's face, in the vision of Ezekiel, the mystical image of the second Evangelist Saint Mark.

colo Pisano, and finished in 1307. On the piazza before the church is the bronze equestrian statue of the Captain-General Gattamelata by Donatello.

In the cathedral is a cadelabrum of bronze fifteen feet high, with sculptures in relief by Ricci, in the style of the year 1500, the *mille cinque cento.*

The church of Santa Giustina was built by Riccio after the design of Palladio. The front is of brick, rough and uncoated. The small cupolas in the interior, and the rest of the interior, resembles Saint Paul's in London. Palladio died in 1580, Sir Christopher Wren, therefore, 90 years after, may have taken some hints from the design of this church. The columns of the church of Santa Giustina are Ionic.

The great justice hall, Palazzo della Ragione, was begun in 1172, and finished in 1306; the ceiling is pointed-arched, of timber, held together by *chiave,* or tie rods of iron. At the end of the hall is an inscription in memory of Livy, erected by his countrymen the Paduans.

In 1283, an old tomb was discovered which Lovato, a poet and lawyer of Padua, maintained to be the tomb of Antenor, the leader of the Heneti, and founder of the city, according to the traditions of the heroic age.* An inscription, written by Lova-

* Strabo, l. 13, mentions the arrival of the Heneti at Adria, and the mouth of the Po, under the command of Antenor.

to, in memory of Antenor, was engraved on the sarcophagus, and the tomb of Lovato himself is placed opposite. *

The building of the university has a court with a peristyle, said to be by Palladio. On the walls of the peristyle are carved the arms of distinguished persons who have studied at the university.

The university was first established in the thirteenth century, by professors and scholars who seceded from Bologna. † Padua came into the possession of the Venetians in the beginning of the

These Heneti came from Asia Minor. The Latin mode of pronunciation changed the word Heneti into Veneti. The name Euganei, which signifies illustrious, seems to be applied by some ancient authors to the Veneti, who lived on the shores of the Adriatic.

According to Adelung, the word Wend, Wand, Vend, in several ancient languages, signifies Water, Sea, and Veneti signifies a people who inhabit the sea-coast. Hence there were Veneti at the head of the Adriatic, Veneti in Gaul, Vand-ali and Wendi on the coast of the Baltic, Heneti or Eneti, according to Herodotus, in Asia Minor on the coast of the Black Sea. But these nations had nothing common with respect to their origin. See Lanzi Saggio di Lingua Etrusca, T. II. p. 634. Adelung's Mithridates, II. s 365.

The word Venetus, signifying a sea-green colour, was afterwards applied to denote one of the four factions of the circus at Rome.

* See Tiraboschi, stor. della lett. It

† Tiraboschi, st. dell lett. It. T. IV. p. 45

fifteenth century, and, after that, it was the only privileged university in the dominions of the republic.

A law, first promulgated by the republic in 1407, forbade the teaching of science in all other cities. Grammar alone was excepted, and might be taught in other places.

The following are some of the distinguished professors who taught at Padua in the sixteenth and seventeenth centuries.

Galileo was professor of natural philosophy at Padua, from 1592 to 1610.

Guglielmini, in 1700, was professor of hydraulic engineering, a subject important to the proprietors, and, therefore, much studied in Italy on account of the peculiar state of the rivers, which require embankments to protect the adjacent country, whilst the river-water for irrigating the fields is derived and distributed to the different proprietors of ground by means of canals, and constitutes a valuable species of property. Guglielmini was born at Bologna in 1655. His principal work is on rivers, *Trattato fisico matematica della natura de' Fiume.*

Vesalius of Brussels was celebrated throughout Europe for his skill in anatomy, and accepted invitations to teach at Montpellier, Paris, Louvain. He was invited also by the republic of Venice, and taught anatomy at Padua from 1537 to 1542. He was afterwards physician at the court of Charles V.

Faloppio was professor of anatomy in 1555.

The anatomical theatre was first constructed at Padua in 1594, at the instance of Fabrizio de Aquapendente, professor of anatomy at Padua. Pisa had the first anatomical theatre in Italy, and then Pavia in 1552.

Morgagni was professor of anatomy in the eighteenth century. He was born at Forli in Romagna.

Santorio, professor of the theory of medicine, was the first who made observations on the quantity of the transpiration of the human body. The loss of weight by transpiration he ascertained by weighing himself at different times of the day, and found it to be very considerable. He published the results of his experiments in the work entitled Medicina Statica, which went through many editions, and was translated into different languages.—He invented the air thermometer, in which the changes of temperature are rendered visible by the variations in the volume of a quantity of air confined by a moveable surface of water.— He also improved the form of different surgical instruments.—He was born at Capo d'Istria in 1561, and lived to the age of seventy-five. After having been professor in the university of Padua, he practised medicine in Venice with great celebrity. A monument was erected over his tomb in the cloister of the Servi di Maria at Venice.

The botanic garden is handsome. The hot-houses

have a small-meshed wire trellis on the outside to defend the glass from hail.

In the open air is a Magnolia grandiflora thirty feet high, now (in December) bearing many ripe seeds. The Bignonia capreolata also climbs on the wall in the open air. The cedar of Lebanon is not so frequent in the Italian gardens as it is in those near London; a large one in the garden at Padua was blown down by a storm.

There is also a giardino economico, or garden for the use of the students of agriculture.

A professorship of botany, at that time confined to plants used in medicine, was first instituted at Padua in 1533. Bologna had not a professor of botany till a year after.

The foundation of the botanic garden, in 1552, is due to Daniel Barbaro. *

Soon after the formation of the garden, Guilandinus, a Prussian botanist, had the superintendence of it.

In 1594, the garden was under the direction of

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* Daniel Barbaro was born in Venice in 1513. He was coadjutor to the patriarch of Aquileia, and one of the members of the council of Trent in 1563. He was a man of learning, and published *La Pratica della Prospettiva*, the first extended treatise on perspective that appeared after the revival of science,—an edition of Vitruvius, and other works. See Tiraboschi, stor. dell. lett. Ital.

Prosper Alpinus, author of a work on the medical art amongst the Egyptians, and a treatise on the plants of Egypt, in which country he had travelled. He was a native of the Vicentine.

Gustavus Adolphus, the great energetic and skilful antagonist of the power of Austria, and defender of the Protestant cause in Germany, * was at Padua, for some months, in 1609, at the age of fifteen, and attended the lectures of Galileo, as Galileo mentions in one of his letters. † In consequence of this, when the king of Sweden visited Padua in 1783, he asked leave to erect a statue of Gustavus in the Prato della Valle, where the statues of the most celebrated men who have studied at the university are placed.

The celebrated historian Davila was born near Padua. He was named Arrigo Caterina, after Henry III. of France and his queen-consort Caterina de'Medici, and resided long in France. He afterwards held several military commands under the Venetian republic. His history of the French civil wars, Storia delle Guerre Civile di Francia, is a classical work. He was born in 1576, and lived to the age of fifty-five.

* An animated description of the exploits of Gustavus Adolphus, and of the other leaders in the thirty years' war, is to be found in Schiller's history of that war, one of the most esteemed historical works in the German language.

† See Tiraboschi, stor. dell. lett. Ital.

The tomb of Petrarch is at Arqua, near Padua. Petrarch was treated with distinction by many of the princes of Italy, Galeazzo Visconti duke of Milan, the king of Naples, the Roman family Colonna, and, amongst others, by the Carrara family, who were sovereign lords of Padua in the fourteenth century, and he died at Arqua, in the territory of that family, in 1374. He was born at Arezzo in 1304. His father was a notary of Florence of the name of Pietro, and familiarly called Petracco and Petraccolo, and the son was first called Francesco di Petracco, and afterwards Petrarca.

In his childhood Petrarch accompanied his parents to Avignon; to which place the popes had transferred their seat in 1309, in consequence of the turbulence and disobedience of the inhabitants of Rome, Philip III. of France having ceded to the popes the country round Avignon, the Comtat Venaissin.

Petrarch studied law at Montpellier and Bologna, but did not become a practical lawyer. He was in orders, and held some ecclesiastical benefices.

Laura, celebrated in the sonnets of Petrarch, was the daughter of the syndic of Avignon, and wife of Hugo de Sade, as the Abbe de Sade has shewn in his life of the poet.

Petrarch was one of the most eloquent writers at the revival of letters, and enjoyed vast celebrity during his life. He received the poet's crown of laurel

in the Capitol, on Easter-day 1341. This was a revival of an ancient ceremony that had been borrowed from the games of Greece, and was introduced into Rome by Nero and Domitian, but had fallen into disuse after the year 230.

After Petrarch had acquired fame, the Florentines restored the confiscated property of his family, and invited him to Florence, from whence his father had been banished by the prevailing faction, but Petrarch did not accept of the invitation, and continued to live at the courts of different Italian princes.

The dialect of the country people near Padua differs considerably from the written Italian, and is a mixture of the Venetian and the lower Lombard, which prevails in Modena, Mantua, &c. In the sixteenth century the composition of comedies, in different popular dialects of Italy, was in fashion, and Ruzzante Beolco,* a native of Padua, was celebrated for the comedies he composed and acted in the *lengua rusteça Pandorana*, the dialect of the country people of Padua.

The high-roads in the Lombardo-Venetian kingdom and other parts of Italy are generally good, and the traveller who has a carriage gets forward expeditiously with post-horses, of which there are relays

* He was born in 1502. Tiraboschi, st. dell. lett. It

at every stage. Some travellers, however, left their own carriages and went in the public vehicles, that they might be less exposed to the attacks of banditti, who, at this time, in the beginning of 1818, sometimes committed depredations on travellers, and particularly between Rome and Naples. For those who travel at a smaller expence there are three modes generally resorted to.—First, the *diligenza*, or public stage-coach, which is tolerably commodious, and goes from Venice to Milan, and from Milan communicates with the stage coaches of Piedmont.—Secondly, the *sedia*, or *seggiola*, a one-horse chaise, on two wheels, with a seat for a single person. This kind of vehicle is to be hired from one town to the next, and goes at a good rate. It is rather rough, the seat being fixed upon the long flexible shafts, which but imperfectly supply the want of steel-springs. The sedia has neither apron nor cover, and therefore affords no protection against the rain. Sedie are met with at the different towns on the road between Venice and Turin, and from Pesaro and Rimini to Bologna, Parma, &c., but they are not found in Tuscany, nor in the Pope's territory to the west of the Appennines.—The third kind of public carriage, and the most commonly employed, are the coaches driven by the *Vetturini*, who set out when they have got their complement of passengers, four or five in number; each passenger makes his bargain, the vetturino engaging to convey the

passenger and furnish him with supper and bed every night during the journey for a sum agreed upon. The inexperienced traveller is always made to pay more than the usual fare by the vetturino, but in this way of travelling he escapes imposition at the inns on the road, as the bill at night is paid by the vetturino. The vetturini travel very slow, only from thirty to thirty-five English miles a-day, stop during the night, and proceed always with the same horses unaided, except in hilly places, where the vetturino finds the country people ready with oxen to hire to assist in dragging the coach up the hill. South of the Lombardo-Venetian kingdom there are almost no diligenze or stage-coaches, so that those who travel in public carriages usually have recourse to the vetturini. At Florence there is an extensive proprietor of vetturino coaches, which sometimes perform long journeys, as, for instance, from Florence or Rome to Paris. A great many vetturini are to be met with at Rome.

In Tuscany and the Roman State, the courier who carries packets for the post-office, has a coach suspended on springs, in which he takes three or four passengers. These couriers go all night, change horses at every post station, and consequently travel quicker than the vetturini. Their fare is higher than that of the vetturini, the carriage is not more commodious, and a bargain must be made also with them, for the price is not fixed, and ad-

vantage is always taken of the foreigner's want of practice.

The inns at the small towns on the road are generally tolerable, but not much to be commended for cleanliness, in which even the inns in the large towns are deficient. Women servants are rarely seen in the inns in Italy; all the service is performed by men.

Between Padua and Vicenza the country is flat; wheat-fields are now green, (16th December.) The fields are divided from each other by wet ditches. There are rows of pollard willows, and pollard poplars with vines trained upon them. The road is well made, it is elevated higher than the surface of the adjoining fields, and has a ditch on each side.

Vicenza.

At Vicenza, a town of 30,000 inhabitants, are seen many considerable mansions and other fabrics designed by Palladio, who was a native and an inhabitant of this town.

In the 6th, 7th, 8th, 9th, 10th, and 11th centuries, the prevalent architecture was the round-arched style which sprung from the Roman, and which gave rise to the pointed-arched. What connection existed between the architects of the point-

ed-arched buildings on the banks of the Ganges,* and the builders of the pointed-arched cathedrals in the twelfth and thirteenth centuries in Europe, is not well ascertained.

At the revival of the arts the architects quitted the round-arched style, and began to imitate the fabrics of the beginning of the Roman empire; they returned to the straight architraves and columns which the ancient Romans had borrowed from Greece, and they copied the models which existed in the ruins of Rome.

In the first part of the sixteenth century, the most flourishing period of the arts in Italy since their revival, this imitation of the Roman style of architecture was practised in its greatest perfection, and the fabrics of that period, by Michael Angelo, Sansovino, Palladio, and Vignola, have served as models in Europe ever since. Amongst these architects Palladio is perhaps the most distinguished for graceful and appropriate buildings, although the works in which he was employed are small in comparison with the majestic cupola of Saint Peter's, by Michael Angelo, Sir Christopher Wren's Church of Saint Paul, or Perrault's colonnade of the Louvre.

One of the most considerable buildings at Vi-

* Views of these mosques, tombs, and bridges, with pointed arches, situated on the banks of the Ganges, are to be seen in the Views in India, by William Hodges, published in 1786.

cenza is the justice-hall, the palazzo della Ragione, renovated and decorated with porticoes by Palladio. It has two loggie, or galleries, externally, one on the ground with Doric pilastres, the other on the principal floor with Ionic. The length of the whole fabric is 217 English feet, the breadth 124. It is now used as a guard-room. The justice-halls at Padua and Brescia are similar to this in their general form and destination.

The interior of the Olympic theatre, constructed by Palladio in the manner of the ancient Roman theatres, and after the description contained in the writings of Vitruvius, produces now but little effect. It is not large, and being scarcely ever made use of for theatrical or other public performances, it is neglected and covered with dust. The decorated ceiling is gone and replaced with boards. The scenes are in perspective, in relief, and are made of carved wood, representing three streets that diverge from the stage. The front scene represents a magnificent hall opening into these streets. This theatre was built at the expence of the Academia Olimpica. Palladio died before the building was completed. It was finished under the direction of Scamozzi. An Academia di Musica, or concert, was given in it in 1816, when the Emperor Francis visited Vicenza. A theatre on a similar plan was constructed by Scamozzi at Sabionetta, for the Duke Vespasian Gonzaga, but it has now gone to ruin. At the end of

the sixteenth century, when these theatres were built, the Italian stage was in a flourishing state. Musical operas (dramme per musica) were then invented, and many poets of eminence were employed in writing for the stage.

One of the principal private buildings by Palladio in the town is the mansion of the Chiericati family, fronting the large open place called La Piazza dell 'Isola. The ground floor on the front has a loggia, or open gallery, with Doric columns. The first or principal floor (piano nobile) is ornamented with Ionic columns, and a loggia interrupted in the middle. The cornice of the Ionic columns is immediately surmounted by the roof. This palace is in a neglected state.

The Rotonda of the Capra family is a celebrated fabric by Palladio, and finished, after Palladio's design, by Scamozzi, situated three miles from Vicenza, amidst ground varied with hill and dale. It contains a basement floor, a principal floor, and an attic. The plan is a perfect square. In the centre is a saloon, whose height reaches from the principal floor to the top of the vaulted cupola, which has a lantern to admit the light. Each front of the square building is adorned by a portico of six Ionic columns of the same height as the principal rooms, and supporting a pediment ; the reason assigned by Palladio for having a portico on each of the four sides is, that the situation of the house commands

agreeable views on every side.* A flight of steps ascends to each of these porticoes. The villa designed by Palladio at Meledo,† in the Vicentine, is nearly similar, and is accompanied by buildings for the use of the farm, connected with the main fabric by colonnades.

It is said that Palladio took the idea of this rotonda from a small fabric at Padua. In a way nearly similar to this Rotonda are disposed the rooms in the Casino of the Villa Pamfili, near Rome, built by Algardi about 1630, and those of Bagatelle, in the Bois de Boulogne, built in the end of the eighteenth century. The Duke of Devonshire's house at Chiswick, erected by that excellent judge of ornamental architecture the Earl of Burlington, is a copy of the Rotonda de' Capra.

Other fabrics by Palladio in Vicenza are, the Palace of the Prefect,—part of the front of the Barbarani mansion, Ionic and Corinthian,—the mansion of Count Porta, Rustic and Ionic; both of these have an attic above the principal floor.—The mansion of the Counts Tiene, the ground floor Rustic, the principal floor Composite, without an

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* Archit. di Palladio libro secondo, Cap. III. De i disegni delle case della citta.

† See Archit di Palladio, libro secondo, Cap. XV. De i disegni delle case di villa di alcuni gentil' huomini di terra ferma.

attic; the design was not completely executed.—The mansion of the Counts Valmarana, with Composite pilasters, which include in their height the ground floor and the first floor.—The front of the house of Franceschini, formerly Schio, of three windows only in breadth,—and the still smaller fabric called Palladio's house, the front ornamented with paintings in fresco by Fasolo, now injured by time. Some of these buildings differ in several* respects from the designs in the printed collections of Palladio's works.

The mansion of the Fressini, in the Corso street, with an extensive front, is by Scamozzi. It has a

* Palladio was born at Vicenza in 1518, and lived to the age of sixty two. He visited Rome in 1547.

Besides the buildings at Vicenza, he designed the Bishop's palace at Trent, the wooden bridge of five arches over the Brenta, at Bassano, the fronts of some churches in Venice, and the church of Santa Giustina at Padua, the mansion of Floriano at Udine, country houses, *case di villa*, with farm buildings attached to them, in the Vicentine, the Trevisan and the Veronese territory on the Brenta, &c. He published,—*Architettura*, in four books, which contains the designs of buildings executed under his own direction, the designs of the ancient fabrics in Rome, and of those described by Vitruvius, Bramante's temple, &c.,—Notes and Illustrations of Cæsar's Commentaries, where he explains the construction of Cæsar's bridge over the Rhine,—and some other works. A collection of his designs of buildings was published at Vicenza, in four volumes folio.

loggia with Ionic columns on the ground floor, and above these Corinthian pilasters, comprehending in their height the principal and upper floor.

Pigafetta, knight of Rhodes, who accompanied Magellan (Magaghanes) in the first voyage round the world, made in the period from 1519 to 1522, and who wrote the account of that voyage published by Ramusio,† was a native of Vicenza.

In the neighbourhood of Padua and Vicenza are rocks of trap porphyry, which Fortis, in his Geologia del Vicentino, published at Paris in 1802, considers to be of volcanic formation. This porphyry is used in paving the streets of Vicenza, Padua, and Venice.—A limestone or marble, similar to the Verona marble, is employed for the ornamental parts

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* Vincenzo Scamozzi was born at Vicenza in 1550, and lived to the age of sixty-six. He built a part of the Procuratorie Nuove at Venice, and the Palazzo Strozzi at Florence. The design he gave for the Rialto bridge was not approved of, and Antonio da Ponte was preferred as the architect of that structure. He published a treatise on architecture in ten books, and Discorsi Sopra le Antichita di Roma, Ven. 1583, with forty engravings, of which fifteen give the detail of the amphitheatre. The buildings executed by him in the latter part of his life are thought to deviate from the simplicity of his first productions, and to partake of the decline of taste which took place in the beginning of the seventeenth century. His son also was an architect. See Temanza vite degli Architetti Veneziani, 1770.

† Ramusio Navigazioni, Tom. I. Ven. 1606.

of buildings in Vicenza.—Strata of pit-coal are found in the territory of Vicenza.—Of the porcellane earth got at Tretto, in the Vicentine, the specimen I saw, was of a dull white, with some reddish spots, like decomposed garnets; it has not the appearance of a granite, whilst the Cornish porcellane rock and that of Limoges are evidently granites. Porcellane is made from this Vicenza rock at Vicenza, and it is used at the porcellane manufactory of the Marquis Ginori, near Florence.

Stone-ware in the English manner, à luso d'Inghilterra, is also made at Vicenza.

Before Bonaparte's campaign in Italy, the present King of France, Louis XVIII., resided for some time at Vicenza, which was then a part of the Venetian territory.

The church of the Madonna di Monte Berico is situated on a hill, two miles from the town. A portico, one side of which is composed of open arcades, affords a covered walk all the way from the town to the church. Another approach to the church is by a stair of 194 steps, from the top of which there is an agreeable view of the neighbouring country. The church was built in the end of the seventeenth century. It has a cupola, and produces an agreeable effect, particularly the interior, which resembles Sir Christopher Wren's church of Saint Stephen Walbrook, the plan being square, and the columns disposed within so as to form a cross; but the or-

naments and mouldings are complicated, and in the degenerate style that prevailed in Italy in the end of the seventeenth and beginning of the eighteenth century. The most esteemed works of architecture in Italy since the revival of the arts, are productions of the end of the fifteenth and of the sixteenth century.

From Vicenza to Verona the soil is gravelly, and there are several embanked rivers which carry and deposit much gravel in their beds.

Verona.

Verona is beautifully situated on the Adige. Near the town, on the left of the river, there are hills with villas, and cypresses* the usual ornament of the villas in this country. At a distance behind these lower hills the more lofty mountains connected with the Alps are seen.

Verona first came under the dominion of the Romans, soon after the arrival of Hannibal in Italy. It was very considerable amongst the towns of the ancient province of Venetia, in the beginning of the Roman empire. In the thirteenth and fourteenth centuries, Verona was governed by its sovereign princes the Scaligers. In the beginning of the fif-

* The cypress and Pinus pinea at Verona do not grow spontaneously, but are planted for ornament.

Pliny mentions that the cypress was first introduced into Italy from Crete.

teenth century it came into the possession of the Venetians, and was the second city in the dominions of the republic. It is now included in the Lombardo-Venetian kingdom belonging to the Emperor of Austria.

The neck of land formed by the Adige at Verona was fortified by a wall by the Emperor Gallienus in the third century, and by another wall built by Theodoric in the beginning of the sixth; the river flowing round, and defending the other sides of the town. Afterwards, other fortifications, including the rising ground on the left side of the river, were formed by Can Grande in 1325, and by Galeazzo Visconti in 1389. When cannon came into use in the end of the fourteenth century, the old walls, with battlements and towers, were no longer a sufficient defence; and recourse was had to fortifications made of walls twenty feet thick, with a broad terrace or mound of earth thrown up behind them, and with bastions formed of thick walls and filled with earth, or filled with vaulted places for cannon, called casemates. *

Amongst the first bastions of this kind were those constructed at Verona for the Venetian republic, about 1530, by Micheli San Micheli. † And, ac-

* Casemate, in Italian, *Casa matta*, signifies a building hollow within. Maffei. Veron. ill.

† The architect Micheli San Micheli constructed likewise

cording to Maffei, San Micheli was the first who made pentagonal bastions, of which all the faces are seen, flanked, and protected by the fire from the curtain and adjacent bastions.

Other Italian authors state the fortifications of Urbino to be the first that were made with pentagonal bastions and oreillons; and these fortifications were built by Batista Commandino, the father of Frederic Commandine, the mathematician.

The bastions of Verona were blown up by the French, and are still in ruins.

Two of the gates of Verona, the Porta Nova and Porta di Palio, by San Micheli, are admired for their architecture and solidity. They have Doric columns and rustic masonry. Each of these gates is in the curtain between two bastions, and is intended to

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for the Venetian republic the fortifications of Candia, which was taken by the Turks after a siege of twenty years, the fort of Sant Andrea del Lido at the entrance of the Laguna of Venice, the fortress of Corfu, &c. He was born in 1484, and died in 1559.

According to Maffei and Denina, the treatise by Marchi, a military officer, published at Bologna in 1599, contains several of the methods of fortification afterwards employed by Vauban.

The military engineers, as well as the other artists of Italy in the sixteenth century, were esteemed and employed in different parts of Europe. Henry VIII. had an Italian engineer, Girolami di Trivigi, in his service at the siege of Boulogne.—See Tiraboschi storia d. lett. It.,—Maffei. Veron. ill.,—and Vasari vita di San Micheli.

serve as a cavalier commanding and protecting the bastions.

Amphitheatre.

The amphitheatre is spacious, although not so large as the Flavian amphitheatre, the Coliseum, at Rome. The building of the Verona amphitheatre has no great appearance on the outside, as there only remains a small part of the high exterior wall, and the rest of the fabric scarcely rises above the adjacent houses. The stone seats within have been renewed since the middle of the sixteenth century, so that the interior forms a vast hollow elliptical cone, the surface of which is composed of the rows of seats. The effect of this view is striking, when seen from one of the upper rows. The seats as they now are, are capable of containing 22,000 persons. A portion of the seats is inclosed in a precinct of wood, for the use of a small theatre, in which plays are acted in summer by day-light. The interior of the Coliseum presents a very different view, the seats being entirely demolished, and the arches that supported them covered with wild shrubs and herbage. The amphitheatre of Verona is built of large squared masses of marble, from Sant Ambrosio, nine miles from Verona on the Tyrol road. This stone has a slight tinge of red. The soffit stones of the arcades are eight or nine feet long. There are also bricks in some parts of the building which are still uninjured, after having suffered the action of the weather for 1700 years; these bricks are large and flat,

like the bricks generally used by the Romans in building; they are eighteen inches long, nine inches broad, and two inches thick.

The long axis of the precinct, inclosed by the outer wall of this amphitheatre, was 522 English feet. The height of the remains of the external wall, consisting of three tier of rusticated arcades, 96 English feet; the fourth story of rectangular windows has fallen down.

The time when this amphitheatre was built is neither recorded in books nor inscriptions; Maffei conjectures, that it was after the building of the Roman amphitheatre, and in the reign of Domitian, Nerva, or the first years of Trajan.

The practice of keeping gladiators, a set of men trained to fight for the amusement of the public, was peculiar to the Romans. In the Olympic games of the Greeks there were no exhibitions of that kind. The number of the gladiators amongst the Romans was very considerable; many thousands are mentioned as being on some occasions inlisted into the army.

In the last times of the republic, and under the first emperors, the combats of gladiators with one another, and with wild beasts, at Rome, were exhibited in the circus, in the forum and in amphitheatres constructed of timber. Vitruvius, who wrote in the time of Augustus, and described the different edifices then in use, does not mention the amphitheatre, from which it is inferred, that there was no amphitheatre of stone at that time.

The fabric of the ancient theatres was borrowed by the Romans from the Greeks; but the amphitheatre was a building of Roman invention, and constructed for the exhibition of gladiators and wild beasts, spectacles peculiar to the Romans.

The amphitheatre of Rome, called Coliseum or Colosseum, and in Italian, Coliseo and Coloseo, begun by Vespasian, and finished by Titus, was the first amphitheatre built of stone, and is the largest Roman edifice of stone that exists. After the model of the amphitheatre of Rome those of Capua and Verona were built.

The exterior precinct of the amphitheatre of Capua had already come to the ground in the time of Theodoric, as Cassiodorus mentions, and the remains of the fabric are now inconsiderable. Of the amphitheatre of Rome and that of Verona the remains are considerable at this day. The seats, and the disposition of the stairs leading to them, is best seen in the Verona amphitheatre. In that of Rome the seats have long been destroyed.

Besides the three amphitheatres above mentioned, the number of those constructed of masonry in other parts of the empire was small. There are some remains of fabrics, considered by authors to have been Roman amphitheatres,—at Syracuse and Catania; in Candia; at Nismes, * and Frejus; at Tarragona,

* The wall of the amphitheatre at Nismes, where the height is entire, is 70 English feet in height, and consists of two tier

Seville, and Italica, in Spain. The edifice at Pola, in Istria, is considered by Maffei to have been an elliptical theatre and not an amphitheatre, as it has the seats only on one side.

There was no amphitheatre of masonry at Constantinople, nor in the Roman provinces in Asia and Africa. In these places the combats of gladiators and wild beasts were exhibited in the hippodrome or circus.

Maffei has published six medals, stamped with representations of the amphitheatre, and he could find no others that were authentic; three are of Vespasian, one of Alexander Severus, and two of Gordian; on the last is represented a combat between an elephant and a bull in the amphitheatre.

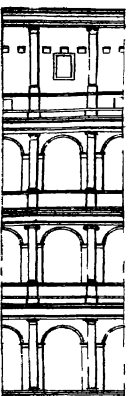
From the combats of wild beasts the amphitheatre is called by Cassiodorus and other writers, Theatrum Venaticum.

Besides the gladiators who were trained to fight in public, individuals were condemned by the courts of justice to fight with men or with wild beasts, and sometimes the condemned were bound and exposed to the wild beasts. In the times of persecution

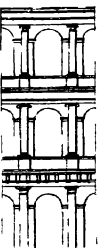
of arcades of masonry, not rusticated, according to the drawings published in the Antiquités de la France par Clerisseau, primiere partie, à Paris, 1778. Maffei doubts whether it was an amphitheatre in the strict sense, with the seats all round.

In the Antiquité Expliqué of Montfaucon, an engraving is given of an amphitheatre at Autun, and this engraving is the copy of a falsified view of that of Verona. Maffei, V. III.

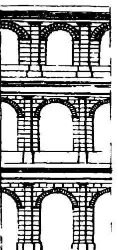
Portions of the External Walls of Ancient Roman Amphitheatres and Theatres



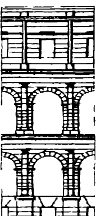
the Coliseum P 333



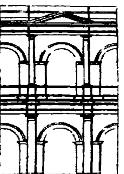
Theatre of Marcellus P 392



Amphitheatre at Verona P 109

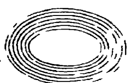


Theatre at Pola P 32 II2



Ampitheatre of Nismes P.1









Ground Plans on a Scale of one Tenth of the Scale of the Elevations

Reduced by Durand

W & D Lizars Sculp^t Edin^r

many Christians suffered in this way in the amphitheatre at Rome, which the Roman Catholics therefore consider as a holy place, sanctified by the relics of martyrs. Capital punishments by burning, whipping, &c.,* came to be executed in the Coliseum. Justinian abolished the exhibition of gladiators in the eastern empire, and in Italy also these ferocious spectacles ceased entirely in the sixth century.

In the street called the Corso, is an ancient gate of the city, consisting of a wall perforated by two arched gate-ways, one for the passengers entering, the other for those going out, with an inscription which shows that this part of the wall was built by order of the Emperor Gallienus, who begun his reign in 261. Another ancient gate is in the Via de' Leoni. A dilapidated piece of antiquity, near the old castle, is called the arch of the Gavii.

Of the palace built by Theodoric no traces remain. An ancient seal of the city of Verona, is considered by Maffei to be a representation of this palace. Theodoric frequently visited Verona, although he held his chief residence at Ravenna.

In the theatre of the Academia de'Filarmonici, the representations were preparing which were to take place after Christmas. In a court adjoining

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* See Suetonius, Suidas, Lactantius.

to this theatre are placed the ancient inscriptions and carved stones collected and arranged under the inspection of Maffei. These antiquities are kept under a lofty portico, supported by Ionic columns, which forms one side of the court, and under a low portico, or colonnade, which goes along the other three sides. Many of the inscriptions were found in the neighbourhood of Verona, and are described in Maffei's *Verona Illustrata.* An ancient Lacedemonian testamentary deed, engraved on marble, is in this collection, after having been in Paris.

The cathedral of Verona is a large old church. In this and some of the other churches several good pictures are to be seen. In the church of Saint George is the Martyrdom of Saint George, by Paul Veronese; an excellent picture, which was in Paris. In the church of San Bernardino is the Capella Pellegrini, a round chapel highly finished, with a cupola, the whole interior formed of polished marble of a dull white, and of that particular kind called bronzino marble,* from the neighbourhood of Verona, most accurately joined, and skilfully carved. This pleasing piece of architecture is the work of the archi-

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* The term bronzino is applied on account of the sound the marble gives when struck. A kind of marble in Tuscany is called Campanino, and a porphyry is named by the Germans Klingstein, for the same reason.

tect San Micheli. Four of the eight Corinthian columns which decorate the chapel are fluted spirally.

There are several mansions or palaces which are of good architecture. The Bevilacqua palace in the Corso is by San Micheli; some of the columns are spirally fluted; the front is incomplete.

The buildings in Verona as well as in Mantua and Padua, are generally of brick plastered over. The fronts of churches, public buildings, and of the more magnificent of the houses of private individuals, are faced with marble, which is got in the country to the north of Verona and Vicenza. This stone is of a dull white, and is susceptible of a shining polish, but it is not polished when employed in the exterior of buildings. The facing of brick buildings with stone is much practised in Italy. When this operation is done in the most solid way, the stone which forms the facing is built in at the same time with the brick in the original construction of the wall; this is called Opera collegata nel muro. But frequently the brick fronts of churches are built rough, with holes and pierres d'attente for receiving the stone facing afterwards, which, if it is applied, never unites firmly with the wall. A less solid manner of incrustation, called investigione and incrostatione, is that in which some of the stones only are built into the wall, and the rest are thin slabs applied to the wall, and retained by the dove-

tail form of their edges, which fit into the grooves of the stones that are built in. *

The tombs of three of the Scaligers, sovereign princes of Verona, Can Grande, and two others, covered with canopies composed of pointed arches and pinnacles, are situated on the outside of a small church in the town. Can Grande I. was lord of Verona, and conquered Brescia, Padua, and Friuli; he died in 1328. Mastino died in 1350. Cansignorio Scaliger died in 1375. Another tomb, without inscription, is said to be the tomb of Mastino I. della Scala, who was elected captain-general of Verona in 1261.

For the sake of English travellers, the shewers of curiosities gave the name of Juliet's tomb to a fabric which has now disappeared, in consequence of the demolition of the adjacent building.

In the Piazza de' Signori are sculptures representing celebrated men natives of Verona, Catullus, Cornelius Nepos, M. Vitruvius, Pliny the naturalist, Fracastoro, † and the Marquis Maffei. ‡

* Architettura di Sebastian Serlio Bolognese.

† Fracastoro was born of a noble family of Verona in 1483, and died in 1554. He was physician to the Council of Trent. He was a patron and encourager of learning, and his residence on the beautiful hill d'Incaffi, near Verona, was the resort of men of letters. In his Latin poem de Siphilitide, he describes the symptoms and ravages of that disease in a serious and elevated style.

‡ Amongst the principal publications by the Marquis Maf-

Giulio Cesare Bordone, commonly known by the name of Julius Cæsar Scaliger, was a native of Verona or of Padua. He went to Agen, where he lived with an Italian bishop of that place, and assumed the name of Scaliger, under pretence of being descended from the family of the Scaligers princes of Verona. He wrote concerning the origin of the Latin language,—a controversial treatise against Cardan, &c. and possessed great celebrity in his time, as did his son Joseph Scaliger. *

The river Adige, which rises in the Tyrol, and has its course to the east of the Lake di Garda, runs through and nearly surrounds the principal part of the town by its winding course. The Ponte del Castel Vecchio, a bridge of three arches built over this river in 1354, in the reign of Can Grande II. is remarkable for the extent of one of the arches, which is 157 English feet in span. † This bridge

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fei are,—the tragedy of Merope, which had great success, was translated into English, and other languages, and was praised by Voltaire, in the preface to his tragedy of the same name, which he addressed to Maffei,—La Scienza Cavalleresca, a treatise against duels,—the learned historical and antiquarian work, Verona Illustrata. Maffei obtained celebrity during his life, and was much esteemed by his fellow citizens of Verona. He died in 1755, at the age of 80.

* See Tiraboschi, stor. dell. lett. Ital.; and Maffei, Verona Illustr.

† 142 Verona feet, each of which is about $13\frac{4}{10}$ English inches, and is $\frac{3}{2}$ of a Roman architectural palm. Maffei, Verona Illust. parte quarta, p. 102.

communicates with the castle; it is narrow, and was part of the old fortifications, and is not used for the passage of the public road. There are three other bridges over the Adige at Verona.—Of the rivers of Lombardy, the Adige, called by the German Tirolese, Etsch, is next in size to the Po.

On the river are seen some wheels that lift water for watering the gardens. The rim of the wheel is hollow and divided into compartments. Each compartment plunges in the water of the river, is filled when at the bottom of the circumference, and empties itself into a trough when it comes to the upper part.

Monte Bolca, situated about fifteen miles from Verona, on the confines between the Veronese territory and the Vicentine, is famous amongst naturalists for the remains of fish which are there found imbedded between the layers of a whitish shale, as between the leaves of a book. The fish are of many different species, and are drawn and described in the publications of various naturalists, according to whose judgment the fish differ in kind from those now got in the Mediterranean; as the naturalists also find, that most other remains of animal bodies in a fossil state in Europe differ from the animals at this day inhabiting the adjacent land and water, and most commonly resemble the animals of a warmer climate. Count Giambatista Gazzola, the proprietor of Monte Bolca, has a very large collec-

tion of these fish at his house in Verona. Amongst other objects in the collection, I remarked a kind of crab without large claws, from Monte Bolca, like the white sea cray-fish, called at Venice Gammara; and the grinding-teeth and bones of elephants from Romagnano, near Verona, similar to the remains of elephants found in Britain, and in many other parts of Europe. Another extensive collection of the fish of Monte Bolca was disposed of by Count Gazzola to the French government, who placed it in the museum of the Jardin des Plantes at Paris, where it is now to be seen.

Near Verona, a small district, called the Tredici Commune, is inhabited by Germans, who retain their native language. Their dialect resembles the German, spoken in the bishoprick of Trent; and towards Trent and Feltre, amongst the hills, is a similar colony of Germans, called the Sette Commune. The origin of these German colonies, at the foot of the southern declivity of the Alps, is not precisely ascertained.* Maffei is inclined to ascribe their origin to the remains of the Cimbri, who were conquered by Marius, in a great battle near Verona; but this is not supported by any probable evidence.

From Verona, the Lake di Garda, anciently call-

* See Adelung's Mithridates, and Maffei Ver. Ill.

ed Lacus Benacus, may be visited; the road from Verona to Brescia passes near its southern extremity. The Lake di Garda is one of the three largest lakes on the southern declivity of the Alps.

At Peschiera, where the Mincio issues from the lake, Attila, in 452, a year before his death, and after having conquered the country, afterwards called Lombardy, received the ambassadors of Valentinian III., emperor of the west, and agreed to withdraw from Italy, on receiving in marriage Honoria, the sister of Valentinian, and a large sum of money. Saint Leo, bishop * of Rome, was one of the ambassadors. This event is the subject of Algardi's sculpture in relief in Saint Peter's, and of one of Raphael's pictures in the rooms of the Vatican. In both of these celebrated compositions, Saint Peter and Saint Paul are represented in the air driving back Attila. †

Near this is the village of Bandes, which Maffei has shewn to be Andes, the birth place of Virgil. It is situated on the brow of the Veronese hills, and commands a view of the plain of Mantua.

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* The bishop of Rome had not begun to assume exclusively the title of Pope till about the year 500, in the time of Theodoric, and one of the Popes was elected by that Prince. Gibbon.

† Vasari, a painter, and little acquainted with history, erroneously describes this event as having happened at Monte Mario, near Rome. See Vasari vita di Raffaelle.

In the mountainous part of the Veronese territory, there grow Scotch fir, silver fir, and larix. Many woods of different kinds in the Veronese were destroyed a hundred years ago, by neglect, and by attempting to cultivate ground which was better suited for wood. *

On one of the mountains is a cavity sheltered from the rays of the sun, in which the snow remains during the whole year; and when the ice-houses in Verona happen to be exhausted in summer, a supply is obtained from this natural ice-house.

Indian corn is cultivated in considerable quantity near Verona, where it was introduced about 200 years ago. †

It is called Formentone at Verona, Melgone at Milan, Granone in Piemont, Gran turco in Tuscany, Maiz by the native inhabitants of South America, and Zea Maiz by Linnæus.

It is a native of the warm climates of America, and is the grain principally cultivated on the Mississippi, where wheat is frequently injured by the great heat.

It is cultivated in Carniola, Styria, and in small quantities as far north as Prague, which is near the latitude of 50°; and nearly in the same latitude are the most northerly vineyards in Bohemia. ‡—It

* Maffei Ver. Ill. † Maffei Ver. Ill.

‡ Wine of a good quality was made near Aussig in Bohe-

gives a great produce, but exhausts the ground, and requires more manure than wheat; it also has the disadvantage of being difficult to keep. It is esteemed much less nourishing than wheat. It is brought to market at a cheap rate, and is the food of the poorer classes in the north of Italy, Carniola, and other climates fitted for its culture.

The bread, which is sometimes made of the meal, has a yellow colour, and is unpleasant to the taste, heavy, and not capable of being well raised.

Indian corn is more frequently used in the form of polenta, which is a mass of paste or hasty-pudding, made by boiling the meal with water.

The stalks of Indian corn are kept in stacks, and serve as food for cattle.

The sheath, called foglia, which envelopes the ear, is generally used in Italy to stuff mattrasses, and is well suited for that purpose. The beds most common, and usually met with in the inns in Italy, consist of two tressels of wood or iron, on which boards or reeds are laid; on these a thick mattrass of foglia, and over it the bed, without bed-posts or curtains.

Peaches, apples, pears, melons, strawberries, and

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mia, in the latitude 51°; but some severe winters killed the vines about the year 1787 See Keysler's Travels; and Gardenstone's Travels.

other fruits, are abundantly cultivated in the territory of Verona, and are of excellent quality.

The wine of the Veronese, which is most commonly used, is sweet, not being completely fermented.

Olives are a good deal cultivated; and the oil that is made from the pulp alone, is esteemed nearly as good as the oil of Lucca and the south of Italy. That which is made by bruising the kernels along with the pulp is less agreeable to the taste, and sells at an inferior price. The olive trees, near Verona, were destroyed by the frost in 1710; it was found necessary to root them out, and plant young trees, so that the produce of olive oil was still deficient twenty years after the accident.* In similar cases, it is often found more advantageous to cut the old olive tree over by the roots, which then send forth a new stem.†

Proceeding from Verona to Mantua, we observe many white mulberry trees, called morari, and in Tuscany, gelsi and mori, a good deal of silk being produced near Verona. Maffei, who wrote about a hundred years ago, complains that the silk was exported from the territory of Verona to Leipsic and Vienna in thread, instead of being dyed and manufactured, and thereby affording employment to the inhabitants. The fields are separated by dry ditch-

* Maffei Ver Ill. † Virgil. Georg.

es. On approaching Mantua, there are clear running streams in the ditches by the road. The road is well made of water-worn gravel.

Mantua.

Mantua is situated in a lake, with reedy shores, surrounded by a flat country, and without the beauty of a mountain lake. The town is fortified; it has four communications with the land by bridges and causeways; and, from the situation, is considered to be capable of holding out long against an enemy.

The church of Saint Andrew is spacious, with Corinthian pilasters, ornamented with grotesque foliage, in the style of the Mille cinque cento, the end of the fifteenth and beginning of the sixteenth century. In this church is a bronze bust of the early painter Andrea Mantegna, who was born at Padua, and died in 1517. He was contemporary with Leonardo da Vinci, and had for pupil Correggio. This bust was taken to Paris by the French, and is now restored to its former place.

The cathedral has a flat ceiling and Corinthian columns for its internal decoration.

At the scuola delle belle arti there is a theatre ornamented in a heavy style.

The Palazzo del T, so called from the form of a building that once stood in the vicinity, is of brick plastered over; some of the ornamental parts are of stone. It consists of a ground floor only, and

was built by Frederic Gonzaga, Marquis of Mantua, who employed Julio Romano in the decorations. The ceiling and walls of the saloon, and adjacent suit of rooms, are painted in fresco by that artist. There are many beautiful figures in these pictures. The figures on the ceiling are painted in their just perspective, that is, as figures seen from a low point of view. This strict attention to the point of view is remarkable also in the ceiling pictures of Paul Veronese, and in the architectural part of the fresco paintings of Raphael in the loggie of the Vatican. The singular subject, which composes the decoration of one of the rooms in the palazzo del T, shews the exuberance of the artist's fancy. It is a representation of Jupiter fulminating the Titans. On the walls of the room are the gigantic Titans, crushed by the fall of the rocks they had piled up, in order to scale the habitation of the gods. The thunderbolts which destroy the giants and their works are seen to issue from the hand of Jove, who is represented in the centre of the ceiling.

The house which Julio Romano * inhabited is in

* Julio Pipi, usually called Julio Romano, was the favourite pupil of Raphael, and completed the pictures in the stanze of the Vatican, which were left unfinished at Raphael's death. Julio was patronized by Clement VII., and afterwards by Frederic II. Gonzaga, marquis of Mantua, who brought him to reside at Mantua. Julio, as Benvenuto Cellini relates, gave

one of the principal streets; it is a moderate sized house, with architectural ornaments. In the same street is a large house, with huge statues in form of termini, in a fantastic and uncommon style. The streets of Mantua are of a convenient breadth, in straight lines, and were laid out by Julio Romano, who was employed by the Marquis to beautify and improve the town.

In the church of the *Madonna delle Grazie*, some miles from Mantua,* a monument was erected under the direction of Julio Romano, in memory of Balthassar Castiglione.

Between Mantua and Modena, we cross the Po by a ferry-boat, which swings on a rope attached to four or five small boats, the uppermost of which is moored in the middle of the river, and up the stream. By means of the helm the boat is placed diagonally in the river, and the stream acting on the upper side of the boat puts it over. The whole is similar to the swinging boat on the Elbe at Pilnitz near Dresden. The country is flat and well cultivated. Vines are trained on a kind of maple. Wheat is sown under the trees, which are thirty or forty feet asunder.

offence to the Pope, by his lascivious drawings engraved by Marc Antonio Raimondi, for a book of Pietro Aretino. Julio died at Mantua in 1546.

* Vasari Vita di Julio Romano.

The part of the dutchy of Modena that we pass through on this road is a plain and fertile country; but the mountainous part to the west, amongst the Apennines, is poor; and chestnuts form a principal part of the food of the inhabitants, as in other parts of the Apennines.

Modena.

In the sixteenth century, the dominions of the family of Este, the parent of the house of Brunswick, included Ferrara, as well as Modena. Their sovereign authority in these cities began in 1249. Ferrara was the chief residence; and the dukes of Ferrara were distinguished for their encouragement of men of genius. The two greatest poets in the refined period of the Italian language, Tasso and Ariosto, lived at their court.

In 1597, Clement VIII. Aldobrandini took possession of Ferrara, with 3000 horse and 20,000 foot; the most numerous army that has ever appeared under the banners of the popes. After this, the dominions of the family of Este were reduced to the dutchy of Modena.

The duke of Modena, now reigning, is son of the Archduke Ferdinand of Austria, who married the princess of Este, heiress of Modena and Carrara, in 1771, and died in 1807, and for the repose of this Archduke they were celebrating a solemn anniversary mass at the time I was in Modena. In the duke's palace at Modena, a large building begun

by Duke Francis I. in the seventeenth century, there are many good pictures. The Inamorata of Titian, Venus and Mars by Guercino, both of them returned from Paris; as is Julio Romano's drawing of the bas reliefs on Trajan's column.

The collection of pictures in the palace was formerly more numerous and valuable. Augustus III., king of Poland, and elector of Saxony, bought 100 of the best pictures of the duke of Modena's collection for L.50,000 sterling. These pictures, amongst which is the Holy Family of Corregio called the Night, the Magdalen of Corregio, &c. are now in the gallery at Dresden.

The duke's library, called the Biblioteca Estense, was formed of the ducal library brought from Ferrara, to which great additions have been made. The learned historian and antiquary Muratori * was superintendent of this library in 1700, and ano-

* Muratori was born at Vignola, in the dutchy of Modena, in 1672, and lived to the age of 78 He was an ecclesiastic, and held the benefice of prior of Santa Maria di Pomposa. He elucidated the history of Italy in the middle ages by his writings, which are voluminous His principal works are,—Rerum Italicarum Scriptores, ab anno 500 ad 1500, in 27 folio volumes.—Antiquitates Italicæ Medii ævi, sive Dissertationes de Moribus Italici Populi, ab inclinatione Romani Imperii usque ad annum 1500, 6 vol. folio.—Novus Thesaurus veterum Inscriptionum in Præcipuis earundum Collectionibus hactenus Prætermissarum, 6 vol. folio.—Annali d'Italia dal Principio dell era volgare fino all anno 1500, 12 vol. quarto, &c.

ther eminent Italian author, Tiraboschi,* held that place in 1780.

The tower of the cathedral, and the sculptures of the pulpit, were the work of Arrigo da Campione in 1322, as appears from the inscription. The cathedral is in the round-arched style.

In the piazza della cathedrale is an inscription in honour of the celebrated historian Guicciardini, a memorial of his having widened and embellished the streets whilst he was governor of Modena. †

* Tiraboschi, author of the Storia della Letteratura Italiana, was a Jesuit till the suppression of that order. He was afterwards professor of rhetoric in the college of Brera at Milan, and lastly librarian to the Duke of Modena. He was born at Bergamo in 1731, and died at the age of 62.

† Francesco Guicciardini was born at Florence, and died in 1540 at the age of 58. He was appointed by Leo X. governor of Modena, which was at that time under the dominion of the Pope, and was afterwards governor of Bologna. He retired from the Papal court after the death of Clement VII. In his villa of Arcetri, near Florence, he wrote his History of Italy, from 1494 to 1534, one of the most esteemed historical works in the Italian language, although the style is rather diffuse. In the first editions, the passages which were thought injurious to the Popes are left out, and one particularly in Book IV. concerning the origin of their temporal power.

Ludovico Guicciardini, a nephew of Francesco, lived at Antwerp, and published a description of the Low Countries, and a History of the Events in Flanders, from 1529 to 1560. See Tiraboschi St. d. lett. It

Tassoni, author of the burlesque poem, the Secchia Rapita, was a native of Modena.*

The plain in which Modena is situated is composed of alluvial matter deposited by rivers. Wells are dug to the depth of about sixty-three feet, till the workmen come to a bed of sand, into which they bore five feet, and a spring of water issues immediately, and keeps the well always supplied with good water.

In some parts of England also the disposition and nature of the alluvial strata admit of this mode of getting water by boring.

In sinking the wells at Modena, they first pass through fourteen feet of rubbish of old buildings;—then vegetable mould;—peat earth, with remains of plants, hazel nuts and other seeds; this earth is in layers, some of which are of a black, others of a lighter colour.—At twenty-eight feet, the workmen come to a bed of clay eleven feet thick, in passing through which there is no water to incommode them; it ends at the depth of thirty-nine feet,—and then there is a bed of peat earth, composed of decayed vegetables.—Then another bed of clay, which terminates at the depth of fifty-two feet.—Decayed vegetables again,—and a third bed of clay, rather thinner than the others.—Decayed vegetables,—and, lastly, the bed of sand and gravel, con-

* Tassoni died in 1635, at the age of 70.

taining remains of sea-shells, and through this the perforation is made by which the water rises. *

The country between Modena and Bologna is a cultivated plain. At this season, the 23d of December, it was seen unfavourably, the snow falling and lying some inches thick. But returning again in April, we saw a country highly cultivated, inclosed with hedges, and interspersed with many houses, some of them of considerable size, occupied by farmers or proprietors. The farm-houses in Italy are large, a part of the fabric being employed as a granary. The grain is threshed immediately after reaping, and there are no stacks of unthreshed corn near the farm-houses, but only a few small stacks of straw. In April the hills thirty miles off to the west were still seen covered with snow. Many of the hedges are of Rhamnus paliurus, a thorny plant which scarcely endures the cold of the climate of London.

Bologna.

Bologna is the mater studiorum, the principal place of study in the Pope's territory. In the scholastic times, that is, in the end of the twelfth, and in the thirteenth century, when vast numbers of students flocked to the schools to learn systems

* Bacchini de Fontium Mutinensium Scaturigine, published about 1700.

which are now seen to be nugatory and useless, Bologna was the most celebrated university in Italy.* Afterwards, in the sixteenth and seventeenth centuries, when the objects of study had become more similar to those of the present day, several men of eminence taught at Bologna. Amongst the professors who at that period attained eminence are the following:

Berengario da Carpi, professor of surgery in 1510, was one of the first who introduced the external application of mercury.

Aldrovandi lectured on uncompounded medicines. By his advice the botanic garden was instituted in 1567. He left his collection of objects of natural history and his library to the Senate of Bologna, who transferred them to the Institute. He was versed in different sciences. His Treatise on quadrupeds, birds, fishes, insects, &c. is in thirteen folio volumes. He was born at Bologna in 1522, and died at the age of eighty-five.

Gaspar Taliacozzi, named from Tagliacozzo, a town in the kingdom of Naples, a native of Bologna, and professor of surgery and anatomy in that university in 1580, author of the book, De Curtorum Chirurgia per Insitionem seu de Narium et Aurium defectu per Insitionem arte hactenus ignoto

* Tiraboschi, Stor. d. lett. It. t. 4. p. 43.

sarciendo, is the learned Taliacotius whose art is celebrated in Hudibras.

Cavalieri, a native of Milan, was professor of mathematics at Bologna. Galileo considered him to be one of the first mathematicians of his time. His book, Geometria indivisibilibus continuorum nova quadam ratione promota, published in 1635, is one of the first works containing the remote principles of the differential and integral calculus. It appears from his book, entitled Ruota planetaria, that he was not free from the belief in judicial astrology. He died in 1647, at the age of forty-nine.

Grimaldi, a Jesuit, was professor at the Jesuits' college in Bologna. His names of the spots on the moon are usually adopted by astronomers. He wrote on the refraction of light, and died in 1663.

Riccioli, a Jesuit and professor in the college of that order at Bologna, died in 1671. His Almagest is a collection of all that was known in astronomy in his time. In his Astronomia nova, he tried to combat the system of Copernicus, with a view to support the censures of the inquisition against Galileo.

The Institute of Bologna was established by Count Marsigli in 1710.* According to its origi-

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* Count Marsigli was of a noble family of Bologna, and served in the army of the Emperor, which service he was obliged to quit, being unfortunately an officer, though not first in command, in Brisach, when that place surrendered,

nal foundation it consisted of an academy of sciences, like the Academy of Sciences of Paris, various professorships, a cabinet of natural history, a printing establishment.

The university and institute occupy a handsome and commodious edifice, in which are contained a collection of objects for the study of natural history, a collection of philosophical instruments, a library, a collection of antiquities, an observatory. The observatory is furnished with a transit instrument and a circle, both made by Reichenbach the Bavarian artist, and a ten feet reflecting telescope, after the manner of Herschel, by Amici of Modena.

In the collection of antiquities I remarked some ancient Roman lead pipes for conveying water. The pipe is fixed between two stones, each of which has a semi-cylindrical cavity embracing one half of the pipe; the other stone fits on the remaining half. Some of these pipes have a section that is not cir-

after a resistance which was considered too short by the Austrian Government. He afterwards received marks of attention and encouragement from Louis XIV. The Institute of Bologna was established by him in 1710, as above mentioned. He published a description of the Danube, with the antiquities and natural productions, from Kalemberg, in Austria, to the confluence of the river Jantra, in Bulgaria, in six volumes folio.—An Account of the Forces of the Ottoman Government, and other works. He died in 1730, at the age of 72.

cular, but pear shaped.* Lead pipes were sometimes used by the Romans to convey water across a valley, the pipe following the curvature of the valley. This is supposed to have been put in practice by the Roman artists who constructed the aqueduct at Lyons, as the aqueduct of masonry goes no farther than the brow of the hill above the valley.

In the same collection is a statue of Pope Bonifacio, composed of embossed plates of brass, and made about the year 1300.

The abbate Mesofanti, librarian, and one of the professors of the university, is celebrated for his acquaintance with a great number of languages, many of which he speaks fluently.

In the portico of the university is a tablet in memory of Galvani, the natural philosopher, and celebrated as the first who observed the phenomena of galvanism, which Volta afterwards explained, and shewed to belong to electricity.

Another tablet is in memory of Laura Bassi, dotoressa di fisica, a lady who was professor of natural philosophy in the university of Bologna. She died in 1778, and in Saint Catherine's church is her tomb, erected by her husband, who was a professor, and by her sons.†

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* A figure of ancient pipes of this kind, found near the Pantheon, is published in the treatise of the Jesuit Donatus de Urbe Roma, in Grævii thes. antiq. Rom. Tom. III. p. 765.

† Authors have recorded the names of other ladies distin-

The botanic garden is furnished with hot-houses, and near it is the giardino economico, a garden for the purpose of giving instructions in agriculture, on which subject a course of lectures is delivered.

In the collection of models of agricultural instruments kept in this garden, I observed an instrument

guished for learning in Bologna at an earlier period. Novella, the daughter of a professor of canon law, about 1350, used to read the public lectures for her father; and that the attention of the students might not be drawn off from the lecture to the teacher, the face of this learned and beautiful professor was concealed by a skreen, as Cristina da Pisano, also of a Bolognese family, curiously relates in the Tresor de la Citè des Dames:

"Pareillement à parler de plus nouveaux tems sans querre les anciënnes histoires, Jean Andry solempnel legiste à Boulogne la grasse, n'amie soixante ans, n'etoit pas d'opinion que mal fust que femmes fussent lettrèes. Quand à sa belle et bonne fille, que il tant ama, qui ot nom nouvelle, fist appendre lettres, et si avant la loix, que quand il estoit occupè d'aucune essoine, pourquoy il ne puvoit vacquer à lire les leçons a ses escholiers, il envoyat Nouvelle sa fille lire en son lieu aux escholes en chayere. Et afin que la beautè d'icelle n'empechast la pensee des oyans, elle avoit un petit courtine devant d'elle. Et par cette maniere suppleoit et allegoit aucunes fois les occupations de son pere, lequel l'aima tant que pour mettre le nom d'elle en memoire fist un noble lecture d'un livres des loix, qu'il nomma du nom de sa fille la Nouvelle." Wolfius de Mulier. Erud. and Tiraboschi.

for threshing wheat used near Bologna; it consists of a thick piece of wood in the shape of an isosceles triangle about five feet high. Along the base of the triangle is a row of short iron teeth, like the teeth of a comb. The interval between the teeth is so small as not to admit the passage of a grain of wheat. The ears of corn are placed upon a floor, and the teeth of the instrument are drawn over them. The machine is drawn by a couple of horses or oxen.

The waggon used at Bologna and in the neighbouring country is a four-wheeled waggon of a peculiar form, drawn by oxen. These draught oxen are of a grey colour, like those in Tuscany, at Rome, and at Vienna.

The Bolognese school of painting is called the school of the Caracci Scuola Caraccesca, from its founders, Ludovico Caracci and his two cousins, Hanibal and Augustine.

The celebrated fresco paintings in the Farnese palace at Rome were executed in eight years by Hanibal Caracci, and the general plan of the pictures was furnished by Augustine Caracci, a man of erudition. The distinguished pupils of the Caracci were Guido Reni,—Domenichino, whose beautiful fresco paintings adorn several churches in Rome, and whose communion of Saint Jerome, now in the Vatican, is considered to be second only to Raphael's Transfiguration,—Lanfranco,—Guercino,—Michael

Angelo da Caravaggio,—Carlo Cignani, a pupil of this school after the death of the Caracci.*

The greatest painters, since the revival of the arts, were the painters who lived about the 1500, in Rome, Florence, Parma, and Venice. They surpassed their predecessors, and produced works of such excellence, that all who have come after are ranked as their imitators; † and of these their successors, the most eminent are the painters of the school of the Caracci, and of the school of Rubens, who was contemporary with Guido.

At the academy for painting, called the Scuola

* Ludovico Caracci was born at Bologna in 1555, and died 1619.

Hanibal Caracci,	- born in 1560,		1609.
Guido Reni,	- - 1575,	-	1642.
Domenico Zampieri, called Domenichino,	1581,	-	1641.
Lanfranco,	- - - 1581,	-	1647.
Gianfrancesco Barbiere, called Guercino, from his squinting,	- 1590,	-	1666.
Michel Angelo da Caravaggio,	- 1569,	-	1609.
Carlo Cignani,	- - 1628,	-	1719.

Two ladies of some eminence as painters flourished at Bologna, Lavinia Fontana, pupil of her father, Prosper Fontana, and Elizabeth Sirano, in 1663, pupil of Guido. Vasari gives an account of Propertia de Rossi, a Bolognese lady, who sculptured statues and bas reliefs, and engraved copperplates in 1520, and succeeded, as he says, in every thing except in gaining the affection of the man she loved.

† Winkelmann, Hist. de l'Art.

delle belle arti, there is a collection containing many pictures of eminent masters. Amongst these are the Patron Saints of Bologna, by Guido; the Mysteries of the Rosary, by Domenichino; the Martyrdom of Saint Catherine, by the same. The two celebrated pictures last mentioned are here, after their return from Paris, as is also the Saint Cecilia of Raphael. There are several fine pictures by Guido and the Caracci; also many pictures by old masters, who lived at the time of the revival of painting in Italy, painted on a gilded ground, in campo d'oro, in the manner then prevalent in Greece, and at Constantinople. Of this style is the Virgin and Child, with the painter's name and year, Vitalis de Bononia, 1420. There are always some individuals who possess a talent for drawing, but in the 7th, 8th, 9th, 10th, 11th, and 12th centuries, the state of society in Italy was such, that no one had leisure, encouragement, or good teachers to improve these talents, so as to become an able painter or sculptor. According to Vasari, the paintings executed in Italy during the above-mentioned period were by Greeks; but Tiraboschi, who shews Vasari's inaccuracies with respect to the history of the middle ages, maintains that there were also some Italian painters. Vasari, excessively partial to his countrymen, the Tuscan artists, relates that Cimabue, a native of Florence, born in 1240, was the first Italian painter after the Greeks of the middle age. Several wri-

ters, however, have shewn that there were Italian painters, in different towns of Italy, before the time of Cimabue. This is proved with respect to Bologna, in the treatise entitled la Felsina * Pittrice.

There are also several private collections of pictures to be seen in the great houses or palaces in Bologna. In the Piazza del Gigante is a statue of Neptune, by the celebrated sculptor Giovanni Bologna. †

On Christmas day I was present at the celebration of mass in the cathedral, at which the cardinal, governor of Bologna, and another cardinal attended. The cathedral is of modern architecture.

The church of Saint Petronius is of brick, and in the pointed-arched Gothic style. It was begun in the year 1390. The front is rough, and waits for an ornamented coat, as is the case with many of the fronts of the churches in Italy. The columns in the interior of the church are of brick and whitened over. On the pavement within the church is the meridian line, traced in 1656 by Cassini, ‡ and renewed in 1776.

* Felsina is an ancient name of Bologna.

† Giovanni Bologna, a native of Douay in Flanders, flourished in the sixteenth century. His sculptures, which are mostly at Florence, shew him to have been one of the best statuaries since the revival of the arts.

‡ Giandomenico Cassini was born at Perinaldo, in the county of Nice, in 1625, and died in 1712, at the age of 87. He studied with the Jesuits at Genoa, and was professor of

The length of the line, from the point perpendicularly under the aperture in the roof that admits the ray, to the point shone upon at the winter solstice, is one six hundredth thousand part of the circumference of the earth; that is, $\frac{1}{1666}$ of a degree, or about 219 English feet. The Italian hour, that happens at mid-day, is marked all along by the side of the line. In the church are two clocks, the one marking the Italian hours, and the other the hore ultramontane, the hours used in the rest of Europe.

astronomy at Bologna at the age of twenty-five. He constructed a new meridian in the church of Saint Petronius in place of the old one, which was the work of Egnazio Dante, and made observations with it for the purpose of correcting the theory of the earth's real, and the sun's apparent motion. He observed the shadows of the satellites on the body of the planet Jupiter, and was able to calculate the period of the rotation of that planet on its axis; he was the first who published an ephemeris of the motions of Jupiter in 1668. At the end of 1668, he was called to France by Louis XIV., at the instance of Colbert. Clement IX. granted him leave of absence for a few years, but Cassini married a French lady, and settled permanently in France. Huygens discovered one of the satellites of Saturn, and Cassini afterwards discovered four others. Cassini observed the zodiacal light, and shewed it to be the atmosphere of the sun. The telescopes he used were made by Campani, an artist who resided in Rome. Maraldi the astronomer was Cassini's nephew. The descendants of Cassini, for three generations, were astronomers at the Royal Observatory of Paris, and his descendant, in the fourth or fifth degree, is distinguished in that city as a botanist.

The Italian hours are reckoned from the end of the twilight, half an hour after sunset, which is the beginning of the first hour, and are counted on to half an hour after the following sunset, which moment is the end of the twenty-fourth hour. The end of the twenty-fourth hour is called *le venti quatro hore*, and *l'ave Maria della sera ;* one hour after that is *una hora di notte*, and so forth. The Italian hours are now almost entirely out of use in Venice, Milan, and other parts of the Lombardo-Venetian kingdom and in Tuscany, in all which places the mode of counting hours common in the rest of Europe is employed. But at Rome particularly, and in other parts of the Pope's territory, the Italian hours are generally used, and these hours are marked by the public clocks. *

* This mode of counting hours prevailed also in Bohemia and other parts of Europe. There is to this day a public clock of a peculiar kind at Prague, which marks the Italian hours, also at Deutsch Brod there is a public clock that strikes the Italian hours, and a similar clock, but not in use, is seen in the cathedral of Lyons. In the Emperor's collection of the schatzkammer at Vienna, there are smaller clocks of the same construction as that at Prague and Lyons, having an astrolabe or sterographic projection of the sphere on the plane of the equator that moves round according to the diurnal revolution of the earth in twenty-four hours, and by another motion shews the sun's place in the ecliptic, whilst the reticula that represents the verticals remains fixed; a clock of this

The church of the Dominicans contains the picture in fresco of the ascension of Saint Dominic, by Guido. In this church is the tomb of Count Marsigli, the founder of the Institute.

The church of the Madonna di San Luca is on a hill called Monte della Guardia, three miles from Bologna. In this church, which was built in 1765, is kept one of the pictures of the Virgin, said to have been painted by Saint Luke. A covered portico or gallery leads all the way from the gate of the town to the church. The portico is of brick plastered over, one side of it is composed of open arcades; it was built at the expence of individuals and the corporations of the town, each of them building one or more arcades as a mark of their devotion.

In the church of Santa Caterina di Bologna is shewn the body of that holy lady Saint Catherine, who died 300 years ago. She is seated and dressed in a gown all embroidered with tinsel. The face and hands, which are uncovered, are black and shri-

kind is drawn in Daniel Barbaro's translation of Vitruvius. The clocks used to mark the Italian hours at Rome have nothing peculiar in their mechanism, and are constructed in the same way as our common clocks; the hour hand generally goes round in six hours. The Italian hour at which mid-day happens is marked in the almanacs at Rome, and by that means the clocks are set by a sun dial. The beginning of the first hour is fixed sometimes at half an hour, sometimes at three quarters after sunset, so that mid day is expressed in quarters of an hour.

velled. This relic, decorated in such an incongruous manner, is not, however, always exposed to public view, but is shewn by the sacristan, a more decent mode than that practised at Vienna, where skeletons of saints, dressed in blue sattin and ribbons, are exposed in the churches to the eyes of the public.

The public burying-ground of Bologna is at the Certosa, a short distance from the town. The practice of burying without the city was introduced here by the French.

In the fourteenth century, when there were two or three simultaneous and rival popes, most of the cities in the ecclesiastical territory came under the dominion of enterprising individuals. Bologna, amongst the rest, was alternately obedient to the Popes and opposed to them, and was sometimes governed by a powerful baron, sometimes by a council of citizens; the word libertas is still inscribed on the arms of the city.

The buildings of Bologna are almost entirely of brick. What stone is used in the ornamental parts is Verona or Vicentine marble, and sandstone for steps from the neighbourhood of Bologna. Most of the streets have porticos or galleries, under which is the path for foot passengers. The pavement under the porticos is in some places of stucco, made of lime mortar, with fragments of marble stuck into it. In other places the pavement of the galleries is of brick. The pavement of the carriage way in the streets is incommodious, being of small water worn stones.

The streets are ill lighted at night, the lamps being at too great a distance from each other The regulations for lighting the streets, which the French attempted to introduce, have not been continued. The streets and even the coffee-houses are infested with beggars.

There is a large covered fish-market built some years ago. It is lighted at night with candles placed in glass lustres. The sea fish is brought from Comacchio, fifteen miles distant.

Bologna possesses manufactories of silk, paper, perfumed soap, and others. The hemp of the neighbouring country is much esteemed for ropes. The liqueurs, cotognato or preserved quinces, and sausages of Bologna, are famed throughout Italy.

The mineral called Bologna stone is a sulphate of barytes, which is found in masses imbedded in the clay or marl near Bologna. After being calcined, it gives out a phosphorescent light, visible in the dark.

The slender unornamented square brick watch-tower is an edifice of a peculiar kind that was in use in some towns of Italy in the middle ages. Several of these towers are still to be seen at Pavia. At Bologna there are two; the highest is called the Tower of the Asinelli. Near it is the Garisenda Tower, which is considerably inclined from the perpendicular. It appears that the foundation having sunk, the upper part of this tower fell, and the part which now exists remained inclined. Bologna is founded on an alluvial soil.

In December the ground was covered with snow, and the atmosphere obscured by mist, so that no view could be had of the neighbouring country. But in the fine clear weather in April, when I revisited Bologna, the view from the top of the Asinelli tower was seen to advantage. This beautiful prospect comprehends the extensive plain, highly cultivated, inclosed, and planted with trees, and near the town some gently elevated heights adorned with villas, amongst which the Villa Aldini, a modern fabric, with its portico and pediment, is conspicuous. The towers of Modena are seen on the horizon to the north-west, and Monselice, or the Euganean hills, near Padua, to the north. These hills are also seen from the tower of Saint Mark's at Venice.

During the carnival, that is, from the end of December to Lent, is the season when theatrical representations are most frequent in Italy. There are generally a few new operas produced every year at that time, and one of these is acted in each of the principal towns, for many nights in succession. The new operas performed in different parts of Italy this season, January 1818, were compositions of Rosini. At Bologna, however, an old opera, Mozart's Don Juan, was in preparation to be exhibited after Christmas. One of the theatres is agreeably decorated in the interior.

The lingua Bolognese, or dialect of Bologna, is

spoken not only by the common people, but is also frequently used by people of the middle ranks. It differs considerably from the classical Italian, the *volgare illustre*. For example,—

Perdonnaz i noster debit, sicom no alter i perdonen ai noster debitur;

E n c', indusi in tentazion;

Ma liberaz da mal. *

Forgive us our debts, as we forgive our debtors; and lead us not into temptation, but deliver us from evil.

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* See Adelung and Vaters, Mithridates, Berlin, 1809.

CHAPTER IV.

Bologna to Florence.—FLORENCE.—Cathedral, and other Churches.—San Lorenzo.—Santa Croce.—Gallery.—Pitti Palace, and other Palaces.—Pictures and Statues.—Quays, Bridges.—Building Materials.—Library of San Lorenzo, and other Libraries.—Museum of Natural History.—Weather.—Plants.—Granary.—Manufactory of Inlaid Agate.—Copperplate Engraving.—Alabaster Figures.—Earthenware, Glass, &c.—Money.—Hospitals.—Wall of the Town.—Pavement.—Language.—Theatres.—Inns.

FROM Bologna to Florence the road is mountainous, over the Apennines, and the distance about seventy English miles. The Vetturini generally have their coaches drawn by mules, and go in two days. In ascending, we observed the Erica Mediterranea, the Ruscus, called Butcher's broom, the Mespilus pyracantha, oaks, and chesnut trees, which grow on ground of a middle elevation, and not on the highest part of these mountains. The rock some miles from Bologna is sandstone.

At Pietramala, which is about the most elevated part of the road, the country is bleak and cold, and

now, on the 27th of December, there was frost and snow. Near this, at a quarter of a mile east from the road, a stream of inflammable gas ascends out of the ground. This stream of gas is on fire, and large enough to be distinctly seen from the road at night. It rises from amongst broken stones. * The gas has been analyzed, and found to consist of carbonated hydrogen gas, like the fire damp which occurs in the coal mines in Britain. A source of inflamed gas, similar to that of Pietramala, occurs on the south coast of Asia Minor. †

Monte Radicoso, over which the road passes, near Pietramala, the highest summit in this part of the Apennines, was found by the barometrical observations of Sir George Shuckburgh in 1775, to be 1901 English feet above the sea.

Going on towards Florence, we come to a long descent where the road is newly made, and conducted in a winding direction. At intervals, the gutter for conducting the water goes into a well, from which there is a large conduit under the road into the valley. This part of the road is made with great care and intelligence; it was begun by orders of Bonaparte. The rock appears to be a sandstone.

* See Ferber's Letters.

† See Captain Beaufort's Voyage in the Levant, published in 1817.

We now descend to the region where the chesnut trees grow, and afford a principal article of food to the inhabitants.

Descending still farther, olive plantations and villas with cypresses appear. Under the olive trees there are fields of wheat, now green. Phylerica and Prunus laurocerasus are planted as ornamental shrubs in the gardens.

After passing an old country seat belonging to the Grand Duke of Tuscany, we have a view of Florence from the height, and the valley in which the Arno runs, circumscribed by mountains.

The Cathedral Church of Santa Maria del Fiore.

The cathedral, whose cupola is conspicuous in a distant view of the town, is remarkable, on a nearer view, from the peculiar manner in which it is decorated, the walls being coated with white marble, and dark green magnesian serpentine, called Pietra di garbo. These stones are applied on the rough wall in thin slabs, polished and cut into figures that represent pannels, foliage, and other ornaments. The outer surface of the wall covered in this way produces an agreeable effect when seen near. The cathedral, the Campanile, the churches of St John the Baptist, of Santa Maria Novella, and of San Miniato, are adorned in this way.

The cathedral was begun in 1298 by Arnolfo di Lapo, a disciple of Cimabuè. The architecture is a kind of Roman, with Corinthian pilasters, &c.

The churches built at that period without the Alps were in the pointed-arched style. The cupola is by Brunalesco, and the lantern, which is of solid* marble, and was finished in 1472. This is the first lofty cupola erected in Europe; Michael Angelo praised its structure, and had it in view when he designed the cupola of Saint Peter's Basilic. The cupola of Saint Paul's in London, and of Saint Genevieve in Paris, rank with these two in magnitude. The cupolas that remain of the ancient Romans, of which that of the Pantheon is the largest, were of a flatter curve, and not raised on such lofty piers: the cupola of the Pantheon is hemispherical within. The cupola of the cathedral of Florence is like the half of an elongated ellipsoid, with the long axis vertical, but the horizontal section is octagonal; it was built without timber centerings, and consists of two vaults, an exterior and an interior, with a vacant space intervening.† The height from the ground to the foot of the lantern is 299 English feet; the whole height from the ground to the top of the cross, 384 English feet.

The front of the cathedral is unfinished, being

* See Vasari's Life of Brunalesco.

† 154 Braccie to the foot of the lantern.

36 Braccie, the height of the lantern.

201 Braccie, the whole height from the ground to the top of the cross. See Vasari's Life of Brunalesco.

The braccia, according to Nelchenbrecher, is equal to $23\frac{37}{100}$ English inches.

without incrustation, and only plastered and painted in fresco, with an architectural design. Vasari * mentions that a front, designed by Sansovino, and composed of wooden columns, and painted imitations of mouldings, statues, and bas reliefs on canvas, was erected on occasion of Leo X. visiting Florence. The interior is spacious, but dark. At the chief altar is a group of a Dead Christ and other figures, larger than life, sculptured by Baccio Bandinelli in 1551. Behind the altar is a group in marble by Michael Angelo Buonaroti; the subject is La Pieta, or the Mater Dolorosa, the Virgin mourning over the dead body of Christ, with two other figures; it is the last work of Michael Angelo, as appears from the inscription, and, like many others of his statues, is unfinished.

The sculptured figures of the Evangelists on the pedestals of the Ionic columns, that form the octagonal inclosure under the cupola, are by Braccio Bandinelli and another artist. The octagonal inclosure is the choir, and was constructed after the design of Brunalesco.

An old picture by Orcagna, representing Dante in a Garden, serves as a memorial of that great poet in the cathedral of this his native city. His body lies at Ravenna, where a monument is erected over his grave.

Near the entrance, and within the church, are

* Vasari Vit. di Sansovino.

two monuments, the one in memory of Giotto,* the most distinguished of the early Florentine painters, and architect of the Campanile, adjacent to the cathedral, who was born in 1276, and died in 1336. The other in memory of Brunalesco, the architect of the cupola of this cathedral, who died in 1446. †

The Florentines once erected in the cathedral a statue of Poggio, the historian, who died in 1459. He was noted for his virulent calumnies; but it is said, that, in course of time, and when the original destination of the statue was forgotten, it came to be placed on the altar as a figure of one of the Apostles.

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* Giotto was the son of a countryman, near Florence. He was employed in keeping sheep, and had made drawings on the rock with chalk. Cimabue, who painted in the manner of the Greeks of the middle ages, passed that way, was struck with the boy's talent, took him home, and Giotto became the pupil of Cimabue. His pictures, which are seen in the churches at Florence and Pisa, are very superior to those of his master Cimabue They are less formal, have more expression and well designed perspective, and the drapery is more gracefully disposed. He painted in oil, in fresco, also in Mosaic, and performed some works in architecture and sculpture. He was the friend of Dante, and is spoken of as a great painter by his contemporaries and countrymen, Petrarch and Boccaccio. See Vasari Vita di Giotto.

† Brunalesco was eminent for his application of machines to the art of building, and, according to Vasari, he revived the use of the three iron wedges called *Ulivella*, the levis for raising stones, having observed the holes used for its insertion in the stones of ancient buildings.

The gnomon and meridian line were formed in 1408 by Paolo Toscanelli, a physician and astronomer of Florence, and repaired in 1756 by the Abbate Ximines. The line drawn on the pavement runs in the transept, in a direction nearly at right angles to the nave, the nave being nearly east and west. The line is only about thirty feet long, and receives the image of the sun, at and near the solstice, in June and July; at other seasons the image is lost on the sides of the cupola. The short diameter of the image in July is about thirty-six inches. The height of the aperture, through which the ray enters in a window of the cupolina, is 277 feet, 4 inches, 9.68 lines French measure; and the inscription farther states, that it is the greatest gnomon existing.*

Observations are still made with this meridian line at the solstice; and at one time large gnomons, with meridian lines similar to this, were used by astronomers, for observing the change which takes place in the obliquity of the ecliptic. Such are the meridian lines in the church of Saint Petronius at Bologna, in the church of the Certosa at Rome, and that constructed by Lemonier in 1743, in the church of Saint Sulpice at Paris. But it is found, that the dilatation and contraction of great buildings,

* It is higher than the sum of the heights of the gnomons of the Certosa at Rome, of Bologna, and of Saint Sulpice at Paris. See *Ximines Trattato del Gnomone Fiorentino.*

from heat and cold, and other causes of error, render the observations made with these gnomons inexact, and far inferior in accuracy to the observations made by modern quadrants and circles.

The Campanile.

Near the cathedral is the *campanile*, or bell tower, incrusted like it with a coating of white marble and green serpentine. This serpentine is got at Prato, and in other parts of Tuscany. The marble also is from Tuscany. This campanile, or tower, was built after the design of Giotto, in 1334, and forms a pleasing object when seen near. In niches, on the lower part of the tower, are statues of the arts and sciences, represented under the figures of Plato, Aristotle, Apelles, and the rest, the work of the chisels of Giotto, Andrea Pisano, the author of the oldest bronze door of the baptistery, and Luca della Robbia, the inventor of the glazed earthen figures. The height is 144 braccie. Giotto intended to have placed on the top a spire of 50 braccie; * but afterwards it was thought to be too much in the degenerate style of the middle ages, and the design was laid aside. No spire of any considerable height is to be seen in Italy.

The Church of Saint John the Baptist.

Opposite to the west entrance of the cathedral is

* Vasari, Vita di Giotto.

the church of Saint John the Baptist, otherwise called the Baptisterium. In this church all the baptisms of the city of Florence are performed. It is older than the cathedral, being of the eleventh or twelfth century. The outside is coated like the buildings already mentioned. The figure of the church is octagonal, and the external form of the roof is an octagonal pyramid. The inside is decorated with round arches, and pictures of saints in Mosaic of the middle ages, resembling the older Mosaics in Saint Mark's church at Venice. There are some large columns of reddish small-grained granite, (or syenite of the mineralogists,) twenty feet or more in height. They have been taken, it is likely, from some ancient Roman edifice. On one of the altars is a statue of Mary Magdalen, represented as emaciated with penitence, and clad in a shaggy garment. The statue is of wood, and the work of Donatello.

The three entrances to the church have each of them a folding door of two leaves. These doors are of bronze, and are celebrated for the excellent workmanship of the sculptures with which they are adorned. The north door is the most ancient, and was made by Andrea Pisano, * after the design of Giot-

* Andrea Pisano was born at Pisa in 1270, and died in 1345. He profited in his studies from the antique sculptures, brought by the ships of Pisa, which was then a flourishing republic, the rival of Genoa. See Vasari Vita di Andrea Pisano.

to. The south door has the name of the artist and the year inscribed on it, Laurenti Cionis de Ghibertis, 1480. It was made on the plan of Andrea Pisano's door, at the expence of the corporation of merchants of Florence, who adjudged the work to Lorenzo Ghiberti, after he had proved his superiority in the art of bronze sculpture in a competition, where his antagonists were Brunalesco, Donatello, and other artists. Both these doors are ornamented with figures, representing historial actions from scripture, and heads in high relief, sculptured in a masterly style, and cast in bronze. A bronze architrave, ornamented with foliage, surrounds the door-ways.

The eastern door is also the work of Lorenzo Ghiberti. It is the finest of the three, and is superior to the bronze door at the east entrance of Saint Peter's in the Vatican, and to those by Giovanni Bologna, at the entrance of the cathedral church of Pisa. After Ghiberti had succeeded so well in the south door, he was employed by the corporation of merchants to make this eastern door, and was allowed to form it according to his own design, without being restricted to imitate in any degree the door of Andrea Pisano. He was employed in this difficult and masterly work for twenty years, from his twentieth to his fortieth year. The pannels are occupied by subjects from scripture in relief. By the side of the pannels are figures of the prophets

and sybils, ten inches high, in niches; and at the corner of the pannels are heads in full relief, one of which is a portrait of the artist himself. The figures are on the outer surface of the door. One of the leaves of the door is too large a mass to be cast with the figures on it at once. The door, therefore, was cast with the heads on it; and the tablets, with the scripture histories, were cast separately and inserted, though the joining is not easily seen. The sculptures on the door are so excellent, by the expression in the features and attitudes, the correctness of design, and the agreeable disposition of the ornaments, that they called forth the praise of Michael Angelo; and they are recommended as models for study, for which reason plaster casts of them are seen in Raphael Mengs's collection of casts at Dresden, and in the collections of casts formed for the improvement of young artists in the different academies in Italy.

Lorenzo Ghiberti, the author of these admirable bronzes, was the son of a goldsmith in Florence, and followed his father's trade. Two of the bronze statues of saints on the outside of Saint Michael's church at Florence are of his work. *

* Vasari Vita di Lorenzo Ghiberti.

The Church of Santa Maria Novella.

The church of Santa Maria Novella has the front, which looks on a spacious place, incrusted like the before mentioned churches.

The front was designed by Leo Alberti,* and erected at the expence of Giovanni Rucellai, an eminent citizen of Florence, in the fifteenth century, and his name is inscribed in large letters on the freeze. Joannes Orcellarius, 1470. The front is in that style of Roman architecture which came into use at the revival of the arts in Italy. The inside is pointed-arched Gothic; the columns supporting the arches are lofty, and have capitals like the Corinthian capital. Michael Angelo is said to have admired and studied the architecture of this church.

The front is exposed to the south, and two gnomonic instruments are affixed to it. The western instrument consists of two armillæ of brass, at right angles to each other, and having the same centre, the one in the plane of the meridian, the other in the plane of the equator. Their diameter is about two feet. A wire parallel to the pole of the world

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* Leo Alberti, in 1481, published Architecture, in ten books, and is one of the first who published engravings of the ancient fabrics of Rome. See Vasari Vita di Leone Alberti.

passes through the common centre, and through the circumference of the meridian armilla.

The other instrument, which is placed on the east side of the entrance, is a slab of white marble, in the plane of the meridian. There are inscribed on it a quadrant of a circle, divided into degrees, with a style in the centre whose shadow shews the altitude of the sun near mid-day; a dial shewing the hours, counted from sunset; another shewing the hours counted from sunrise; and one shewing the astronomical hours. These instruments were made and erected by Ignazio Dante,* in 1573, at the expence of Cosmo I. de' Medici.

* Ignazio Dante was a monk of the order of Predicatori. He was employed in making celestial and terrestrial globes. The Grand Duke Cosmo I. de' Medici brought him to Florence. He began the construction of a gnomon in Santa Maria Novella, but it was not completed. See Ximines, Trattato del Gnom. Fior. On the death of Cosmo, Dante went to Bologna, and was professor of mathematics. In 1576, he constructed the gnomon in the church of Saint Petronius, which was afterwards improved by Cassini.

The geographical maps of different regions of Italy, painted on the walls of the Vatican gallery, are his work, and done by order of Gregory XIII.

He was employed, with Clavius the Jesuit of Bamberg, in calculations for reforming the calendar. He published Le Scienze Matematiche ridotte in Tavole,—Trattato del uso del Astrolabio,—Comento sulla regola della prospettiva del Barozzi. He was born at Perugia in 1537, and died in 1586.

This church contains several paintings by old masters. In the choir, behind the chief altar, are a set of beautiful pictures representing the life of the Virgin and the life of Saint John the Baptist, painted in 1485 by Ghirlandaio. The artist has introduced portraits of Peter, John, and Lorenzo de' Medici; of himself, of Politian, Ficinus, Demetrius Chalcondylas, and others of his contemporaries. These pictures are described in Vasari's Life of Ghirlandaio.

Paradise and the Infernal Regions are represented on the walls of one of the chapels by Orcagna.

A Virgin and Child, larger than life, by Cimabue, the earliest Florentine painter of note since the revival of the arts; he flourished in the end of the thirteenth century.

There are some paintings on the walls of the cloister of the monastery which is contiguous to the church.

The Spezieria, or drug-shop, of this monastery is noted for the preparation of various medicines and of essence of orange flower, and other essential oils and perfumes.

San Miniato.

The church of San Miniato, on the hill situated without the walls of Florence, is likewise incrusted exteriorly with marble and verde di Prato or magnesian serpentine. It was begun in 1013. The

nave is separated from the aisles by round arches, supported by columns with Corinthian capitals. There is some mosaic of the middle ages, like that in Saint Mark's at Venice. At the east end is the Presbiterio or chancel, elevated above the rest of the pavement, as was usual in the ancient churches. Behind the altar are five windows closed with thin slabs of pavonazzo marble,* which admit a yellowish light. The pavement of one of the chapels is composed of antique red porphyry, and the antique green serpentine† of the statuaries and architects. This particular kind of inlaid pavement occurs in several ancient churches in Florence, in Rome, and other towns of Italy. It is also to be seen in Westminster Abbey on the shrine of Edward the Confessor, who died in 1066; which shrine was evidently constructed by Italian artists of the same school as those who formed the pavements here spoken of. The twisted columns covered with gild-

* Or perhaps the marble from Seravazza near Carrara, which has some resemblance to the antique pavonazzo marble.

In the church of Saints Cosmo and Damian at Rome, there is a window closed with a translucid slab of pavonazzo marble, in the same way as those just mentioned.

† The surface of the antique serpentine is dark green, with angular spots of a lighter green. It is a porphyry in mineralogical language, the term serpentine being appropriated, in mineralogy, to a class of stones which contain magnesia.

ed and coloured mosaic, similar to the columns which adorn the shrine of Edward the Confessor, are also met with in old churches in Rome and Florence, and especially in Saint Michael's church in Florence, where the beautiful pointed-arched and pinnacled tabernacle or canopy over the altar is supported by twisted columns covered with the same kind of mosaic. This tabernacle was the work of Orcagna, * otherwise called Cionis, and is inscribed with his name, Andreas Cionis pictor Florentinus hujus oratorii archimagester extitit 1359. It is ornamented with Scripture histories in relief in marble; the pieces of marble of which it is composed are fixed together by pins of bronze run in with lead.

Church of San Lorenzo.

In the church of San Lorenzo, built in 1425 by Brunalesco, are two pergani, or reading desks, adorned with subjects from Scripture, in relief and in bronze, by Donatello, †—the tomb of Peter and John de Medici, sons of Cosmo Pater Patriæ, with

* Orcagna also designed the Loggia in the Piazza del Gran Duca, and painted some of the pictures in the Campo Santo at Pisa. See Vasari Vita d'Andrea Orcagna.

† Donato, called Donatello, was a native of Florence, and lived from 1383 to 1466. His principal works at Florence are, the statue of Judith in bronze, in the Piazzo del Gran Duca; Magdalen, a statue in wood, in the baptisterium,

a bronze grate in form of a net of ropes, by Verrocchio, and other works of art. In the passage from the church into the cloister is the statue, in a sitting attitude, of Paulus Jovius, the historical writer, and Bishop of Como, by Francesco di S. Gallo. In the court of the monastery adjoining to the church of Saint Lorenzo, is the Medico Laurentia library, of which we shall speak afterwards.

The Chapel de' Depositi.

From the church of San Lorenzo an entrance opens into the Sagrestia Nova, or Capella de' Depositi, erected by Michael Angelo, by orders of Leo X. This circular chapel is of a moderate size. The ceiling is a round cupola.

There are two monuments of the Medici facing each other, and adorned with statues from the chisel of Michael Angelo. Each monument is composed of a sarcophagus, on the top of which are two reclining emblematic statues larger than life. On one is a figure of Night, represented by a female asleep wearied with the fatigues of the day. The

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David, a statue in bronze, in the bronze room of the gallery; David, a statue in marble; Saint John, a statue in marble, both in the gallery. The reliefs in bronze, on the pergami, in the church of Saint Lorenzo. The winged lion of bronze, placed on one of the granite columns at Venice, is a work of his, and the equestrian statue of General Gattamelata at Padua.—See Vasari Vita di Donato.

female figure on the other sarcophagus is Aurora, awaking and reluctantly quitting a state of repose. The second reclining figure on each sarcophagus is a male; both these are only rough hewn and unfinished. Above the one sarcophagus, in a rectangular niche, is a statue, in a sitting posture, of Giuliano de Medici, Duke of Nemours, and brother of Leo X. In the niche above the other sarcophagus is the seated statue of Lorenzo de' Medici, Duke of Urbino. Besides these works of Michael Angelo, there is another production of his chisel in this chapel, a statue of the Virgin and Child. In this chapel, and on the tomb of Julius II. in the church of Saint Peter in Vinculis at Rome, Michael Angelo's chief works in sculpture are to be seen; the wonderful figure of Moses on the tomb of Julius II., in that church, is his most celebrated statue; next in rank come Night and Aurora in this chapel; and La Pieta in Saint Peter's Basilic. Some of his other sculptures are, the Restoration of the Dancing Faun in the gallery at Florence,—La Pieta in the cathedral at Florence,—a Virgin on the high altar in the church of San Lorenzo,—David in the Piazza del Granduca,—Adonis wounded, in the Grand Duke's Villa Poggia Imperiale, near Florence,—a bas relief of the Virgin with a dead Christ, in the church of the Albergo de' Poveri at Genoa.

The Great Chapel.

A passage leads from the Capella de' Depositi to

Capella Grande, a spacious octagon covered by a lofty cupola, built, in 1604, by the Grand Duke Ferdinand I. de' Medici, as a burying place for the sovereigns of Tuscany. The original design was, that the whole inside should be incrusted with agate and jasper of various colours,* and a part is executed, producing a brilliant effect, but a great part remains to be done, and still presents to the eye the

* Amongst the stones employed are, Sicilian jasper, with yellow stripes; red jasper from Cyprus, Rosso di Cipro; jasper of Barga in Tuscany, there is a slab five feet in diameter; Egyptian granite; granite of the island of Elba, called Ethalian granite, from an ancient name of that island; Verde di Corsica Duro or Smaragdito, a compound rock, of which the chief constituent mineral is that called by the French mineralogists Diallage and Euphodite, and by the Germans Schillerstein and Labrador Hornblend; Pietra di Paragone, black touchstone, and black Egyptian basalt, which is distinguishable from black marble by the metallic trace it receives when iron is rubbed on it; red coral and mother-of-pearl shell are also inlaid amongst these stones.

The art of forming and polishing the hard siliceous stones has long been practised in Florence. Vasari mentions several artists about the year 1500, who made vases and crosses of rock-crystal, lazuli, and other hard stones, some of which are seen in the gallery; these artists also engraved gems of Cornelian and agate. In course of time, the manufactory of inlaid agate was established, of which we shall speak afterwards; and which is a work of the same kind with the coating of the Capella Grande of San Lorenzo, both in respect to the nature of the stones, and the mode of working them into thin slabs.

rough brick wall. The Grand Duke, Ferdinand I., had the project of removing the holy sepulchre from Jerusalem, and erecting it within this chapel.

Santa Croce.

The spacious church of Santa Croce contains the tombs of Michael Angelo Buonarroti, of Galileo, and his disciple Viviani, of Machiavel, * of Leonar-

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* Galileo Galilei was born at Pisa in 1564, and died in 1641, aged 77. In 1589, he was appointed professor at Pisa; and, in 1592, was called by the republic of Venice to their university of Padua, where he taught for eighteen years. At the end of this period he received the appointments of principal mathematician in the university of Pisa, and natural philosopher to the Grand Duke, together with a considerable salary, and without the obligation to reside or read lectures.

Paul III. Farnese, was an admirer of the science of astronomy, and favoured the doctrines of Copernicus, who was then publishing his work. But afterwards the court of Rome held a different opinion, and the Inquisition forbade Galileo to write in defence of the opinion, that the earth moves round the sun: he did notwithstanding publish a dialogue on the question, and, at the age of seventy, he was called before the Inquisition at Rome, accused of having maintained and published the doctrine of Copernicus, concerning the motion of the earth in its orbit round the sun. Galileo's account of the manner in which he was treated by the Inquisition, in a letter to his friend Father Vincenzo Renieri, is published by Tiraboschi.* The punishment inflicted on him was confinement for some months, first in the Villa Medici, the residence of the Floren-

* Tiraboschi Stor. dell. lett. Ital. The letters of the ambassador, addres-

do Bruni Arettino the historian, of Alfieri and other men of distinguished talent. It has frequently been

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tine ambassador at Rome, and then at Siena, in the house of his friend the Bishop of Siena.

Galileo was one of the first who made telescopes. Viviani, the pupil of Galileo, in the life he has written of his master, states, that Galileo, whilst a student at Pisa, discovered that the vibrations of a pendulum in a small arc are synchronous, from having observed the vibrations of a lamp suspended from the lofty ceiling of the cathedral of Pisa. He is said to have had the idea of applying this discovery to regulate the motion of clocks, but he did not put this idea in execution This was first done by Huygens in 1657. Galileo was one of the first who invented the sector, called by him *Compasso geometrico e militare,* and compas de proportion, by the French Byrgius, in Germany, invented one about the same time.

Galileo was the first who observed and calculated the periodical revolutions of some of the satellites of Jupiter, which he called *stelle Medicee*, and proposed the simultaneous observation of their eclipses at two different places on the earth, the precise moment of mean time at each place being observed, the difference of these two times is the difference of longitude between the two places, or the angle formed by the meridian planes on which the places are situated,—a mode of observing the longitude which is still employed at land, and which gives the result, without the necessity of a long calculation. The occultation of a fixed star by the moon, is the most exact of all the methods for determining the longitude, but requires a long calculation. Galileo intended to form

to the Grand Duke of Tuscany, contain a particular diary of what happened to Galileo, while engaged with the Inquisition. These letters are published by Targioni Tozzetti.

proposed at Florence to erect monuments in memory of the celebrated Florentine authors, Dante, Pe-

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an ephemeris and tables of Jupiter's satellites, for the purpose of deducing the longitude from their eclipses; but he was prevented from carrying this into effect by the loss of sight. Cassini was the first who published accurate tables of these satellites, thirty years after Galileo's death.

Galileo discovered the phases of Venus by means of his telescopes, and was one of the first who observed the spots on the sun

He was unfortunate in his opinion concerning comets, which he considered to be formed from terrestrial exhalations, in opposition to the theory of Tycho, who held the true opinion, that they are celestial bodies moving in eccentric orbits.

But the genius of Galileo is principally displayed in his discovery of the phenomena of falling bodies. He shewed the falsity of the opinions of Aristotle on that subject, and demonstrated that the spaces fallen through by bodies near the earth's surface are in proportion to the squares of the times.* Newton afterwards made his wonderful discovery, and proved this to be a particular case of the law of gravitation, which deflects the planets from a rectilinear motion, and retains them in their orbits. Galileo deduced that the path of a projectile is a parabola.

VINCENZO VIVIANI was born in Florence in 1622, and died in 1703, aged 81. He became a pupil of Galileo, when that great genius was old and deprived of sight; and he afterwards published a life of his master. The fifth book of the conics of Appolonius Pergeus was awanting; it was known to contain a treatise on the maxima and minima of straight lines, drawn

* Galileo, Dialoghi intorno alla nuova Scienza.

trarch, and Boccaccio, * and of Accorso or Accurtius, the commentator on Roman law, who lived in the year 1200; but this has not yet been effected.

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to the periphery of the conic sections. Viviani composed and demonstrated a set of propositions on this subject; and, in his restauration, the subject was found to be treated as in the work of Appolonius, which was afterwards obtained by a translation from the Arabic. He was employed as engineer, to examine the waters of the Chiana, with Cassini who was appointed by the Pope. The problem proposed by him, to design a cupola with four equal windows, so that the internal surface shall be capable of exact quadrature, had celebrity at the time, and was answered by Leibnitz, James Bernoulli, the Marquis de l'Hopital, Wallis, Gregory, and by himself, in the work he published on the subject in 1692. The house built by Viviani, with the money he received in pension from Louis XIV., is to be seen in Florence.

MACHIAVEL was born at Florence in 1469, and died in 1527, at the age of 56. He was secretary of the government or republic of Florence, and ambassador at the courts of Louis XII., of the Emperor Maximilian, of Julius II., and others. In his History of Florence, from 1215 to 1492, and Life of Castruccio Castrucani, Machiavel is judged to be guilty of partiality. His verses and comedies are little esteemed. Il Principe, and his Discourses on the First Decade of Livy, are his most noted works, and attracted notice on account of the principles of selfishness and direct villany that he recommends. To controvert this doctrine, Frederic II. of Prussia published a book entitled Anti-Machiavel.

* BOCCACCIO was born in 1304, and died in 1375, aged 71. His father was a citizen of Florence, and the son was bred a merchant, but quitted that profession. Boccaccio was employed in different embassies by the government or republic

The monument in memory of Alfieri, executed by Canova at the expence of the Countess of Albany, consists a female figure, a statue representing Italy mourning for the death of the poet.

The fine picture called the Limbus, or Preliminary Habitation of the Saints in the World to come, by Angiolo Bronzino, contains a beautiful figure of Eve; other celebrated pictures adorn the church and sacristy, or vestry.

Adjoining to the church, are the buildings formerly occupied as a monastery, and a chapel, the capella de Pazzi, decorated in front with a portico of Corinthian columns, in a pleasing style, by Brunalesco. In the ceiling of this portico is a cupola twelve feet or more in diameter, composed of pannels containing rosone or roses, of Lucca della

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of Florence. An intimate friendship existed between him and Petrarch. His collection of tales, entitled Decameron, is considered as one of the best models of Italian prose. Its circulation was very great, Mazuchelli enumerates ninety-seven Italian editions. The obscenities in the Decameron were a subject of repentance to Boccaccio in his old age. The first professor's chair for reading to scholars on the Greek language in Italy, at the revival of science, was instituted in Florence about the year 1362, at the instance of Boccaccio; the professor who occupied this chair was Leo Pilatus, author of a Latin version of Homer. Greek was not taught at Oxford till thirty years after, and then it began to be prelected on by Latimer and others, who had studied at Florence under Demetrius Chalcondylas, as Knight mentions in his Life of Erasmus.

Robbia's glazed earthenware, which remains entire after so many years exposure to the air. The colours of the glazing are white, blue, and green.*

The Annunziata.

In the church of the Annunziata there is kept, but not publicly exposed, a miraculous picture of the Annunciation. The artist who was employed despaired of being able to paint the Virgin; having finished the other parts of the picture, he was overcome with sleep, and on waking found the figure of the Virgin completed by some celestial being. This was in 1252. In the Lives of the Saints, mention is made of several images of this kind, not formed by mortal hands, and termed αχειροποιητοι, and αχειροτευκτοι.

A more incontestible work of inspiration is the celebrated Madonna della Sacca, painted by Andrea del Sarto, in fresco, in the cloister adjoining to the church. The Virgin is seated on a cushion, the Child and Saint Joseph are the other figures. The four walls of the ambulacrum of this cloister are covered with fresco pictures, by Procetti and others, representing the actions of the seven Florentines, who founded the order of the Servi di Maria. The tomb of Andrea del Sarto is in this cloister, with his bust in bronze; he died in 1606.

* Views of the Capella de' Pazzi are published in Montigny et Famin, Architecture Toscane, Paris, 1815.

Another cloister is painted in fresco, with the actions of Saint Philip, some of which are by Andrea del Sarto; as are the Adoration of the Three Kings, &c.

In the church is a chapel built at the expence of the celebrated sculptor Giovanni Bologna; it is in the style of Michael Angelo's vestibule to the Laurentian library.

In the church of Santa Magdalena de' Pazzi, the organ screen is painted by Cipriani, a native of Florence, whose works are known in England; he died in London in 1789.

In the Piazza before the church is an equestrian statue in bronze of Ferdinand I., Grand Duke of Tuscany, by Giovanni Bologna, erected in 1650; the pedestal is of granite from the island of Elba.

The ancient Etruscans, called by the Greeks Tyrheni, were a civilized nation, as appears from the perfection they attained in the arts, which the bronze figures, gems, and other sculptures with Etruscan inscriptions attest. The history of the Etruscans is obscure, and the fragments of their language that remain are now unintelligible.

They were, originally, according to Adelung, a Celtic nation, in Rhœtia, the Tyrol, from which they migrated by Trent and the valley of the Adige, into Italy, about 1000 years before Christ, and subdued the Umbri, another Celtic nation, who occu-

pied the banks of the Po, forcing them to remove southward and westward. * Adelung founds this conjecture on the resemblance of some names of places in the Tyrol and in Tuscany, and on the works of Tuscan art found in the Tyrol, which were seen in Maffei's collection at Verona. † He rejects the opinion of Herodotus, that the Etruscans came from Lydia.

The civilization of the Etruscans, which did not happen at so early a period as is generally supposed, arose from their connection with the Pelasgi, whom they found already established in the middle of Italy, ‡ and who peopled that country with colonies, before the time of the later Greek colonies, who settled in the south of Italy. Adelung and Lanzi consider the oldest Etruscan inscriptions to be only of the third and fourth century after the building of Rome.

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* Adelung's Mithridates, II. Th. s. 455. See also Freret, recherches sur l'origine et l'ancienne histoire des differens peuples d'Italie, in the Memoires de l'Acad. des Inscriptions, Tom. 18.; and Heine's Observations on the 7th and 8th Books of the Æneid.

† See Joh. v. Muller's Geschichte der Schweitz, B. I. Cap. V. and von Hormayrs Geschichte, von Tyrol.

‡ The following works treat of the Etruscans and their language: Gori difesa dell Alfabeto degli antichi Toscani, Firenze, 1742. Luigi Lanzi Saggio di Lingua Etrusca e di altre antiche d'Italia, Rom. 1789. Heyne, in Novis Commentat. Gottingens.

They were conquered by the Romans, 280 years before Christ, and Tuscany continued subject to the Roman empire for 700 years, till the fifth century, when it was subdued by the Goths, and during the sixty years that the Gothic kingdom of Italy subsisted, Tuscany was governed by a prefect. In 568 Tuscany was conquered by the Lombards, who appointed Dukes, removeable at will. In 774 it came under the dominion of Charlemagne, and was governed by Counts appointed by that Prince, as Eginhard, Chancellor of Charlemagne relates, in his History.

Under Louis le Debonnaire, the Governors of Tuscany had the title of Marquis, being appointed to guard the marches, or frontiers; they were also called Dukes.

Afterwards Tuscany was sometimes ruled by Governors, appointed by the Emperors of Germany, sometimes by Marquisses, Counts, or Dukes, who were hereditary, and considered by the Emperors, successors of Charlemagne, as their feudal vassals.

Of these hereditary rulers was the Countess Matilda, called la Gran Contessa Matilda, who was born about the year 1046, and died in 1115. She was cousin of the Emperor Henry IV., but carried on war against the Emperor, in support of the interest of the Popes, and made a donation to the Papal throne of her patrimonial territories, and also of the dominions which she held in fee from the crown of Italy, which fiefs she had not the right to dispose of; but,

after her death, the Popes claimed both, and disputed the point with the emperors for 200 years. The Popes still retain Viterbo, a part of her bequest, and a monument is erected to her memory in Saint Peter's Basilic church, where she is honoured along with the great benefactors of the Papal power, Constantine and Charlemagne. She refused in marriage the son of William the Conqueror, and, in 1089, married the son of Guelf, Duke of Bavaria; this was her second marriage. Her dominion extended over Tuscany, Mantua, Modena, Reggio, Parma, and other places south of the Po.

After the year 1267 the government of Tuscany became oligarchical or republican, with elective magistrates, and sometimes was in the hands of a lord or military chief, elected by the principal families.

At this period lived the enterprising leader, Castruccio Castrucani, of whom Machiavel has written the life. He was chosen Lord of Lucca by the citizens of that place, and was created by the Emperor Duke of Pistoja and Prato. He carried on war against the Florentines, who chose as their Lord, to make head against Castruccio, the Duc of Calabria, son to the King of Naples. Castruccio was opposed to the Popes, and supported the cause of the Emperor Louis of Bavaria. Castruccio died in 1328, at the age of 47.

In 1342 the Florentines elected, as their lord and ruler, Gautier de Brienne, Duke of Athens, who was deposed a year after.

The Florentines got possession of Pisa in 1406, by the treason of Giovanni Gambacorta, Captain-General of the Pisans.

The family of Medici in the fourteenth century held the rank of private citizens in Florence. They acquired great riches by trade, and, from the address with which they conducted themselves, they became the leaders of one of the parties or factions, and, at last, rulers of the state. Cosmo, in 1434, governed without assuming the title of Prince. He gained the esteem and affections of the people by his prudence, and the liberal use he made of his wealth and, after his death, was called the Father of his Country, Padre della Patria.

His son Pietro lived a short time, and left two sons, Giovanni and Lorenzo. Giovanni was killed in 1478, in Francesco Pazzi's conspiracy against the Medici. By Lorenzo the family was brought to the summit of its glory. He ruled without the title of Prince, and managed the affairs of government with such prudence, as to gain the love of his countrymen, and the respect of foreign nations. He collected manuscripts and antiquities in a princely style, and died in 1492, at the age of forty-four.

Lorenzo left three sons, Pietro, who succeeded him in the administration of the government, Giovanni, afterwards Leo X., and Giuliano.

Pietro incurred the hatred of the Florentines by taking part against Charles VIII. of France. He

was driven from Florence, and the palaces of the Medici were given up to pillage. He was drowned in the GariglIano in 1503.

The Medici returned to Florence, and regained their power, and, in 1531, Alexander de' Medici was the first solemnly recognized by the States of Florence as Duke. The Medici family reigned from 1531 to 1737, when Gaston de' Medici, the last Grand Duke of that family, died without heirs. Before his death, France, Spain, and Germany, made a treaty, by which it was determined, that the Duke of Lorrain should inherit the Grand Dutchy.

Francis, Duke of Lorrain, accordingly succeeded. He espoused the Empress Maria Theresa, and, in 1765, was succeeded in the Grand Dutchy of Tuscany by the second son of that marriage, Peter Leopold, who ruled with wisdom, and gained the affection of his subjects. After the death of his brother, Joseph II., Leopold ascended the imperial throne in 1790. He left a numerous family.

In 1801, Tuscany came under the dominion of the house of Parma, of the Spanish branch of the Bourbons. Bonaparte afterwards forced the Queen of Etruria, of the royal family of Spain, now Dutchess of Lucca, to resign, and Florence was under his government till 1814, his sister, Eliza Baziocchi, residing there as his vicegerent and representative. In 1814, Tuscany came again to be governed by a Prince of the house of Austria, in the

person of the Grand Duke Ferdinand III., now reigning.

Works of Art collected by the Medici.

The antiquities collected by Cosmo Pater Patriæ and Lorenzo were mostly dispersed during the revolutions of the Medici family, in the fifteenth century. Leo X. recovered a part of these collections. In the sixteenth century the Grand Duke Cosmo I. laid out large sums of money in collecting productions of art; and, by his command, Georgio Vasari, the painter and architect, erected the building called the Ufizi, in the upper floor of which the gallery is situated. Francis I., the successor of Cosmo, increased the collection, and added the Tribuna, and some other rooms. Ferdinand I. de' Medici, brother of Francis, made many valuable additions to the gallery: whilst Cardinal, he acquired the Venus since called Medicea, which remained in the villa Medici at Rome till the time of Cosmo III., when it was removed to Florence. The group of Niobe also was acquired by Ferdinand, and was not brought to Florence till the time of Peter Leopold. The Popes prohibit the removal of any considerable antique work from Rome; but these statues here spoken of, and the Farnese statues now at Naples, have been removed during the vacancy of the Pope's throne, or by favour of the Pope.

The Gallery.

The magnificent collection of pictures, statues, and other productions of the graphic arts contained in the gallery, is one of the most extensive and valuable in Europe, a monument of the taste and activity of the Medici family, by whom it was formed. It may be ranked next to the collection in the Vatican, which surpasses all others in the number of master-pieces of ancient sculpture. The public are allowed access unincumbered by any unnecessary restraint, and artists are permitted to copy.

In the vestibule of the gallery are the busts of different individuals of the family of Medici who contributed to enrich the collection, from Lorenzo downwards. Amongst the statues in the vestibule are two antique figures of dogs in marble, both alike. Of this figure there are other antique repetitions, similar in size and attitude, at Rome, and one at Helmsley in Yorkshire.

The gallery itself, adorned in every part with pictures and statues, forms three sides of an oblong rectangle. On the two long sides of the gallery there are entrances into rooms in which the more remarkable objects are kept.

The ceiling of the gallery is painted with grotesque designs, (grottesche,) in other places with interlaced branches and vines on trellis work, imitating an arbour, with birds perched or flying a-

mongst them, a mode of decoration in which Raphael's pupil, Giovanni da Udine, was excellent, as is seen in the loggie of the Vatican, and in the Grimani Palace at Venice, painted by Giovanni da Udine. In one part the ceiling is decorated with the story of the Twelve Ambassadors,* and other subjects pertaining to the history of Florence.

Below the frieze, all round the gallery, is a collection of portraits of eminent men, Gustavus Adolphus the supporter of the Protestants and the opponent of the house of Austria, Wallstein, and other generals of the thirty years' war, and statesmen, philosophers, and poets of all nations. These portraits are less interesting for the merit of the painting than for the persons they represent.

Along the sides of the gallery are placed a number of ancient Roman busts of emperors and mem-

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* In 1291, when twelve ambassadors from different courts came to Rome, to congratulate Bonifazio VIII., the Pope, astonished to find that they were all Florentines, exclaimed, "Florence is the first city in the world, and the Florentines the refined fifth element, the quintessence of mankind.—La citta di Firenze e la migliore citta del mondo, e la nazione Fiorentina nelle cose umane è il quinto elemento."

The story is expressed by Verino in the following lines.

Romanæ merito antistes Bonefacius urbis,
Cum Florentinos diversis partibus orbis
Vidisset Roma regum mandata ferentes,
Terrarum semen tum quinta elementa vocavit

bers of the imperial family, Augusti et Augustæ. One of the most esteemed is a bust of Marcus Aurelius.

The most distinguished of all the rooms which have their entrance from the gallery is the round cupola room, lighted from the top, called the *Tribuna*, containing a selection of the most precious of the pictures and statues that belong to the collection. The statues are the Venus de Medici, the hands of which are modern, and added by Baccio Bandinelli; * the Dancing Faun, the body antique, the arms and head added by Michael Angelo; the antique group of Two Wrestlers; the Young Apollo, called the Apollino; and the statue called the Arrotatore.

Amongst the pictures in the tribuna are, the Young Saint John, or San Giovanino, the Amoretta, the portrait of Julius II., † all by Raphael; the Virgin looking at the new-born Child lying on the Ground, by Correggio; a Holy Family, the Virgin, Child, and Saint Joseph, by Michael Angelo; the

* This famous statue is the only object of the gallery that was carried to Paris

† Raphael painted several other portraits of this warlike and impetuous Pope, who patronized him. They are to be seen at the Pitti Palace, and the Corsini Palace in Florence, and several times repeated in the Stanze of the Vatican. The tomb of Julius II. is the most celebrated production of Michael Angelo's chisel.

attitudes are uncommon, and the colouring is yellowish; * a Recumbent Venus, by Titian; a picture by Andrea Mantegna; one by Albert Durer, &c.

One of the rooms contains an interesting and numerous collection of the portraits of eminent painters, painted by themselves. Two hundred of these were collected in the seventeenth century, by Cardinal Leopold de' Medici, brother of the Grand Duke Ferdinand. In the portrait of Michael Angelo, he is represented at an advanced age, but with the hair of the head still black. There is one of

* This is one of the few pictures by Buonaroti in oil. Some of his other pictures in oil are the Parche the Three Fates, at the Palazzo Pitti; Fortune, in the Corsini Palace at Florence, David cutting off the Head of Goliah, treated in two different ways on the two opposite surfaces of a large Pietra di Lavagna, in the gallery of the Louvre at Paris. This Pietra de Lavagna is a slate which is got at Lavagna, in the territory of Genoa, it is used for covering roofs in that country, and pictures on this kind of slate are seen in different collections. The principal paintings of Buonaroti in fresco are in the Sistine chapel, and are much injured by time. Buonaroti is recommended by Sir Joshua Reynolds as a model for painters to imitate, although Sir Joshua's own manner bears little resemblance to that of Michael Angelo. Raphael Mengs dissents from the opinion of Sir Joshua, and proposes for imitation the pictures of Correggio, distinguished by pleasing gracefulness of expression, and beautiful colouring, in which the pictures of Michael Angelo are deficient.

Raphael. The portraits of some British artists are seen, Sir Joshua Reynolds, Jacob More, the landscape painter, and some others.

In the other rooms, the pictures are disposed according to the schools, that is, the pictures of artists of the same country are placed together. In the room containing the Florentine school is a celebrated chiaroscuro, or picture in one uniform colour, by Fra Bartolomeo;* the Virgin, by Sassoferrato; a Magdalen, by Carlo Dolce, half figure, and many others.

Fine pictures by Titian and Paul Veronese are seen amongst those of the Venetian school.

Amongst the Flemish there are some by Rubens, but more of the productions of this great master, so varied in the subjects he treated, are to be seen in the gallery at Dresden,—and in the Louvre, where his pictures of the Life of Mary de' Medici, the consort of Henry IV., formerly at the Luxembourg Palace, are now placed; his celebrated Descent from the Cross is returned to its former situation in the cathedral of Antwerp. He succeeded in

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* Bartolomeo was a Florentine of great talent as a painter. He lived in the time of Michael Angelo. He was converted to a religious life by the sermons of Savonarola, to whom he was much attached. He afterwards became a friar, and was called Fra Bartolomeo di San Marco, from the monastery of Saint Mark at Florence. See Vasari Vita di Fra Bartolomeo.

every character.—The Kermess or Flemish Wake, in the Louvre, is a representation of the dances and gross amusements of the country people,—the Judgment of Paris, in the Dresden gallery, is treated with drollery and humour. In the Louvre, Lot and his Family leaving the devoted city is solemn, with varied expression. That, and other collections, contain his landskips,—lion hunts,—portraits, —bacchanalian scenes,—emblematic and heroic actions,—and his church pictures in the grand and elevated style.

There are several pictures by Gerard Hondhorst of Utrecht, called Gerardo delle Notti, on account of his excellence in representing night scenes, with fire-light. He flourished in 1630.

Amongst the pictures by old German masters is a portrait of Luther and his wife Catherina de Bore, by Holbein.

In the room allotted to the French school are pictures by Lebrun, Poussin, Lesueur, Vernet the painter of sea-pieces, and others.

The celebrated statues of Niobe and her Children were placed in the room, which they now ornament, in 1780, by the Grand Duke Leopold, afterwards Emperor. At one end of the room is the group of Niobe and one of the daughters, of one piece of marble. The others, which are single figures, are disposed along the sides of the room. The whole of these figures were found between Rome and

Adrian's Villa at Tivoli. Mr Cockerell's opinion, which is received with much approbation by antiquaries, is, that the figures were placed in the tympanum of a pediment, the statue of Niobe occupying the middle.

A collection of statues, and other ornaments in bronze, is disposed in one of the rooms. Amongst them is the celebrated Mercury ascending, by Giovanni Bologna, * and two or three smaller figures of the same subject, which he made previous to the production of the complete one; another celebrated statue of this master is in the loggia of the Piazza del Granduca at Florence, and the two equestrian statues at Florence are his productions.

In this bronze room, there is a small human figure, a span high, representing the exterior muscles

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* Jean Bologne, called in Italy Giovanni Bologna, was born at Douay in French Flanders, and died in 1606. He studied at Florence, before the death of Michael Angelo, and is one of the most esteemed sculptors since the revival of the arts. His principal works, four of which are mentioned above, are,— The Group of the Sabine, at Florence, in imitation of which is the Pluto carrying off Proserpine, a group of three figures, by Giraidon of Troyes, after the design of Lebrun, in the Garden at Versailles,—the bronze Mercury in the gallery at Florence,—the marble Group of the Centaur at Florence,—the [illegible] equestrian statues at Florence,—the statue of the Grand [illegible] at Leghorn,—the Neptune at Bologna,—Mercury and Psyche formerly at Marli, before the destruction of that palace, which happened in the revolution of the French government.

as divested of the skin, by Michael Angelo, and another figure of the same kind, eighteen inches high, by Cigoli.* A large bronze antique Etruscan figure of a chimera, a bronze statue of a man in the dress of a Roman senator, with Etruscan letters on the border of the robe; both are of the natural size, and very few other Etruscan figures of so large a size exist. Winkelmann considers the bronze wolf in the conservator's palace in the Capitol to be also an Etruscan work.

A room contains majolica, the thick and clumsy earthenware, made by Castelfranco, ornamented with mythological designs, after Raphael and Julio Romano.

In the collection of Greek vases that have been called Etruscan, there are some entirely black, with foliage in relief, which are less frequently met with than the vases with red figures on a dark ground. Most of the ancient painted earthenware vases have been found in the kingdom of Naples, particularly in the ancient tombs at Nola; also in Sicily, at Girgenti, and Catania. It is uncertain whether any of them have been found in Tuscany. The histories represented on these vases are frequently subjects from Homer, and from the Greek mytho-

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* Ludovico Cardi, called Cigoli, of whom there are several works in the gallery, and, amongst the rest, a fine picture of the Continence of Joseph, was born near Florence, in 1559, and died in 1613.

logy, and events of the heroic age of Greece, and the names sometimes written over the figures are in Greek, and none have been found with Etruscan inscriptions.* Winkelmann, however, is of opinion,† that the figures on some of these vases are drawn in the Etruscan style, and, therefore, may be the workmanship of the Campanians, who lived at Capua, and were sprung from the Etruscans. The drawing of the human figure on many of these ancient earthen vases is masterly, and, from the absorbent quality of the pottery, the outline must have been formed with rapidity, at once, without going over again or retouching. Drawings are valued as shewing the original spirit and the bold ideas of the painter, unrestrained, and not cooled by the labour, thought, and time that a finished picture requires. These earthen vases are specimens of the drawing of the ancients, and are thought to equal the drawings of the best artists since the revival of the arts in Europe. The outline of the figure is drawn in black, the ground is painted of the same colour, and the figure is left of the reddish colour of the pottery.—The pottery is light, thin, neatly turned, and of no great hardness.—Some of the vases have been found of the large size of four feet high.—They were

* Winkelmann, Hist. de l'Art.

† Winkelmann, Histoire de l'Art, Livre III. Chapitre III de l'Art des Etrusques.

used by the ancients for containing the ashes of the dead; some of them for ornamenting rooms, and they were given as prizes in the games of Greece. The vases have been imitated by Wedgewood; and some less perfect imitations have been made in Italy, and sold as ancient.

In the room where the vases of rock crystal and of other hard stones are kept, some works of Benvenuto Cellini attract the attention, particularly a vase of lapis lazuli, adorned with handles in form of fanciful dragons or salamanders. In the bronze room there is a shield, helmet, and breastplate, with figures in silver, in relief, by the same artist. The bronze figure of Perseus, after cutting off Medusa's head, is also his; it is in the piazza del Granduca. Cellini sunk the dies, and coined several of the medals and coins of Clement VII.; one has Moses striking the rock, on the reverse. These medals are much esteemed for the excellence of their sculpture.*

In the same room is a casket, composed of pannels of rock crystal, on which is beautifully sunk or en-

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* *Benvenuto Cellini* was a goldsmith, and exercised his trade in Rome and other places. He published an amusing account of his own life, in which he relates, in a natural style, the vicissitudes consequent on his irregular and turbulent conduct, and gives some particulars of the history of his contemporaries, Michael Angelo, Julio Romano, and others. He was born at Florence in 1500, and died in 1570.

graved *in cavo*, the history of the Passion, consisting of many small figures, an inch high, which are seen through the substance of the crystal; this casket was made for Clement VII., by Valerio of Vicenza, a celebrated engraver of gems, who died in 1546. *

A remarkable object in one of the rooms is the large antique marble vase, adorned with figures in high relief, celebrated under the name of the Medici vase. The companion to this vase was in the Borghese collection, and is now in the Louvre.

Pitti Palace.

The collection next in point of importance is that at the Palazzo Pitti. In this palace the Grand Duke resides. It formerly belonged to the Pitti family, whose name it bears, and was from them purchased by Cosmo I. de' Medici. The front, begun by Brunalesco, is extensive. It is of broached rustic, and looks rather gloomy. The court within

* See Vasari's Life of *Valerio Vicentino*, and of other engravers of gems, rock crystal, and dies for medals, who lived at the beginning of the sixteenth century. Of *Marmita*, one of these engravers, Vasari says, that, he made money by counterfeiting antique medals,—'Fu gran maestro di contrafar medaglie antiche, delle quali ne cave grandissima utilita. *Greco*, another engraver of cameos, made a medal with a head of Paul III. Farnese, and on the reverse, Alexander the Great, seeing the high priest of the Jews, which Michael Angelo praised highly as a masterly work.

the building is in a style somewhat different. One suite of rooms contains the magnificent collection of pictures chiefly formed by the Medici family.

It comprehends the collection of the Dukes of Urbino, of the family della Rovere,* which, after the death of the last Duke of that family, became the property of Victoria, Grand Dutchess of Tuscany, consort of Ferdinand II., and heiress of the family della Rovere.

Amongst the many excellent pictures in this collection are, the Three Fates by Michael Angelo,—the portrait of Leo X., with Cardinal Julio de' Medici and Cardinal Rossi,—the celebrated Madonna della Seggiola,—the Madonna della Finestra Impannata, so called from the papered window represented in the picture,—all by Raphael. The two first of these pictures, by Raphael, were in Paris, as was the Martyrdom of Saint Agatha, by Sebastian del Piombo, and the picture of three figures with musical instruments, said to represent Luther, Calvin, †

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* Pope Julius II. della Rovere prevailed upon the Duke of Urbino to adopt his nephew, who was likewise nephew of the Duke, by which means the Dutchy of Urbino passed into the family della Rovere. Duke Francis della Rovere died in 1631, leaving his principality to the Papal government, as his feudal superior; his free, allodial, and acquired property went to Victoria, Grand Dutchess of Tuscany.

† Calvin was for some time in secret at the court of Ferrara in 1535. See Tiraboschi, St. d. l. It.

and Catherine de Bore, by Giorgione;* but there is little resemblance between this portrait and those of Luther by Lucas Cranach and by Holbein; and in the account of the Louvre gallery this picture is only termed a concert, with a Benedictine monk at the harpsichord, a Dominican with a violoncello, and a young person with a black bonnet and feather.—A picture composed of two female figures, called la Modestia e la Vanita femminile, by Leonardo da Vinci.—Judith carrying the head of Holophernes, by Cristofano Allori. † This picture was in Paris.

The other half of the principal floor is occupied by the state apartments, at the end of which, in the centre of a circular room hung with four mirrors, is Canova's beautiful statue of Venus. It is seen to much advantage by means of the mirrors, four different views by reflection being seen from one place. This statue was got by the Florentine government after the French had removed the Venus de Medici, and fill-

* Giorgione died in 1511 at the age of thirty-four. Vasari mentions a head drawn by him, a portrait of one of the Fuggers, the celebrated merchants of Antwerp who were concerned in the Fondaco de' Tedeschi at Venice, and possessed palaces in Rome See Vasari Vita di Giorgio da Castelfranco detto Giorgione, and Luther s Colloquia Mensalia.

† Cristofano Allori was born at Florence in 1577, and died in 1621.

ed the place in the tribuna of the public gallery during the time that celebrated masterpiece of ancient art was in Paris. On the return of the Venus de Medici to Florence, Canova's Venus yielded up the pedestal in the tribuna, and was placed in the palazzo Pitti.

Adjoining to the palace is the Boboli garden, of considerable extent, and partly on a rising ground. It is laid out with broad walks bordered with high hedges of laurel, (*Laurus nobilis.*) There are many fine cypresses, numerous statues, and, in the lower part of the garden, fountains.

Academy of Painting.

At the academy of painting, the Scuola delle belle arti, instituted by the Grand Duke Peter Leopold in 1784, there is a considerable collection of pictures, amongst which are several productions of the oldest masters. A large picture of the Virgin, seated on a throne, with the Child and Angels, by Cimabue. Like his other pictures it is on a ground of gold, in campo d'oro, and in a very formal style. Cimabue was the earliest of the Florentine painters. He learnt the art from some Greek painters who were employed in Santa Maria Novella.* He flourished in 1280. His colours are em-

* Vasari, Vita di Cimabue.

bodied with size and with the yolk of eggs, as Vasari relates in his introduction to the lives. The art of painting with colours embodied by oil, was not used till a hundred years after his death, when it was discovered by John van Eyck, called John of Bruges, who flourished in the year 1400. The number of Cimabue's pictures that now exist is very small.

A picture of the Adoration of the Magi, by Gentilis di Fabriano, with the year inscribed 1423. Mary Magdalen, clothed in a brown shaggy rug, in the same way as in Donatello's statue in the baptistry, with the inscription,

Ne despeietis vos qui peccare soletis
Exemploque meo vos reparate Deo.

The ground is gold, and on the border are eight small pictures representing the actions of Magdalen.

Small figures, two feet in length, in burnt clay, by Michael Angelo, representing Night and Aurora, the models of the marble statues executed by him in the Capella de' Depositi at San Lorenzo.

There is also a collection of plaster casts of the most esteemed statues and bas reliefs for the use of the students.

On the walls of the court are busts and bas re-

liefs in glazed earthenware, terra cotta invetriata, by Luca della Robbia or his school.

Corsini Pictures.

The collection of pictures in the Corsini palace, a conspicuous building by Silvani, on the quay Lung' Arno, is numerous and valuable. In this collection are to be remarked,—a cartoon, by Raphael, of the portrait of Julius II. A head of a woman representing Poetry, finished so that it seems to rise from the canvas, by Carlo Dolce; the pictures of Carlo Dolce have become too dark in the shaded parts, a defect owing to the printers' ink, or lamp-black, which retains its colour whilst the colours mixed with it fade.* Horse-travellers going over rocks, with a plain and river seen below, and in the distance, by Salvator Rosa. Fortune, dropping crowns and treasures from her right hand, instruments of punishment from the left, by Michael Angelo. At the head of the staircase is a seated statue of Clement XII. Corsini, who died in 1739.

Fabrics.

The palace formerly the residence of the Medici family, built by Cosmo Pater Patriæ, has the court surrounded with a loggia or open-sided gallery on the ground-floor, and adorned with busts, bas reliefs,

* This effect of printers' ink in painting is mentioned by Vasari.

and ancient inscriptions, resembling, by these decorations, the courts of some of the palaces in Rome.

The palace of Duke Strozzi is a large gloomy cubical mass of building, with rustic work on the outside. Another Strozzi palace was, in part, designed by Scamozzi.

In the mansion of the Buonaroti family are preserved some sketches by the great Michael Angelo.

The Palazzo del Podesta, which is now used as a prison, has the court covered with old coats of arms carved in stone, and the windows pointed-arched. *

In Florence, and other towns in Italy, the exterior of houses and the fronts of churches are sometimes painted with designs in fresco on the plaster. In the piazza Santa Croce the front of a large house was painted, in 1619, with figures and architecture by Pasignano, and fifteen other good artists, in the space of twenty days. These paintings have in some degree retained their colour after 200 years exposure to the weather. At this day, in Italy, large paintings or outlines of histories are sometimes seen designed on the outside of a plastered wall, the work of some young painter who takes that method of making his talent known.

* A view of the court of the Palazzo del Podesta, and views of the principal buildings in Florence, Siena, and Pisa, are published in the Architecture Toscane par Montigny et Famin, Paris, 1815.

In this same piazza Santa Croce is the house in which Urban VIII. Barberini was born. He was elected pope in 1623.

There were, in the middle ages, a great many towers or private fortresses in Florence, as in Rome and other cities in Italy. The number in Florence is said to have been 150. Most of these were demolished when the government began to be more regular, in the beginning of the dominion of the Medici family.

The Palazzo Vecchio, in the Piazza del Granduca, is a lofty old building, with battlements, originally designed by Arnolfo di Lapo, and now occupied by some of the public offices. The court is small, surrounded by a colonade and corridor, painted with grotesques, and with views of the cities of Germany; in the middle, a bronze Cupid by Verrocchio. The great hall is adorned with pictures and statues; the ceiling painted by Vasari, who designed the architecture of the interior of this palace; the pictures relate to the history of Florence, Cosmo I., crowned Grand Duke of Tuscany by Pius V. in 1570, &c. Amongst the statues is a group of Victory with a prisoner, by Buonaroti, intended for the tomb of Julius II. The adjoining Guardaroba also contains some pictures, and other works of art.

In front of the Palazzo Vecchio are two colossal sculptures; the one the statue of David, with a sling

in his hand, by Michael Angelo, the second celebrated statue in point of time that he executed, La Pieta, in Saint Peter's basilic, being the first;* the other is the group of Hercules and Cacus, by Baccio Bandinelli. †

On the public clock of the old palace the hour at night is shewn by the transparent and illuminated numbers of the hour and minute. In theatres at Venice, and other places in Italy, a clock of this kind is placed above the stage.

The loggia, built after the design of Orcagna in 1356, and which occupies part of one of the sides of the Piazza del Granduca, is adorned with some good statues. Under its round arches are placed the group of a Roman carrying off a Sabine woman, with an old man on the ground by Giovanni di Bologna, in marble;—Perseus, after having cut off the head of Medusa, by Benvenuto Cellini, in bronze;—Judith, by Donatello, in bronze;—two marble lions, one of which is by Flaminio Vacca, a sculptor who flourished at Rome in the latter part of the sixteenth century.

In the Piazza del Granduca is the equestrian

* See Vasari Vita di Michel Agnolo Buonaroti.

† Baccio was the contemporary of Michel Angelo. He was laborious, and had a good knowledge of design, but was endowed with little genius. See the Life of Baccio, which name is the Florentine contraction for Bartolomeo, in Vasari Vite dei Pittori.

statue of Cosmo I., Grand Duke of Tuscany, by Giovanni Bologna, erected in 1594, with three histories in relief on the pedestal ;—the Coronation of Cosmo by Pius V. in 1570 ;—the entry of Cosmo into Siena, which had submitted to his forces ;—Cosmo, elected Duke of Florence by the Florentine senate. Near this statue, in the piazza, is the front of a house designed by Palladio.

In the Piazza della Nunziata is the equestrian statue, in bronze, of Ferdinand I., Grand Duke of Tuscany, by the same master, as already mentioned. Between the bridge of the Trinity and the Pitti Palace is the group, in marble, of a centaur, combating with one of the Lapythæ, by Giovanni Bologna.

A pedestal, in the place before the church of Saint Lorenzo, is adorned with figures, sculptured in high relief, by Baccio Bandinelli, representing captives brought to John the father of Cosmo I. The column of granite, surmounted by a statue of Justice, was erected in 1564 by Cosmo I., to whom it was presented by Pius IV. It was taken from the baths of Antoninus Caracalla at Rome.

The loggia of the Mercato Nuovo was built in 1548 by order of Cosmo I., for the conveniency of the dealers in silk. Under it is a wild boar in bronze, copied from the antique one of marble in the gallery.

Another similar loggia, in which corn is sold, is called Piazza del Grano. It was built in 1619.

Without the gate of San Gallo is a triumphal arch, erected in 1739, on occasion of the arrival of the Emperor Francis I., when he succeeded to the sovereignty of Tuscany after the extinction of the Medici; the arch is from the design of Schamant of Lorrain, and is loaded with ill-selected ornament.

Quays and Bridges.

The Arno, during its course through Florence, is embanked on each side by stone quays, with a street between the quay and the front of the houses, a disposition which gives an agreeable view of the river and the opposite bank from the street. At Pisa a similar arrangement is seen. And the quays in Paris, opposite to the gallery of the Louvre, present a view of the same kind, but decorated with more magnificent buildings. The quay, by the side of the Arno, at Florence, is stated by Sir G. Shuckburgh to be 190 English feet above the sea.

Of the four bridges over the Arno, the Ponte della Trinità is celebrated for the agreeable flat elliptic form of its three arches. The abutments of the piers project much, so as to produce the disagreeable effect of concealing the arches from the view when the bridge is looked at obliquely. It was built after the design of Ammanati, in the reign of Cosmo I., in place of a bridge washed away by the overflowing of the river in 1557.

There are two wears across the Arno at Florence for the purpose of driving mills. The boats that

come up the river from Pisa lie some distance below the lowest wear. When there is a sufficient quantity of water in the river, the passage by the boats from Florence to Pisa is made speedily.

The Arno has deposited considerable banks of sand, with some gravel, by the side of its channel, just below Florence.

The spouting fountains at Florence are not numerous. There are some in the Boboli garden. They are supplied with water brought by a conduit from the neighbouring heights. It is at Rome that spouting fountains are in greater abundance and perfection than in any other city of Europe. In Florence water for domestic purposes is got by means of wells sunk in different parts of the town.

Building Materials.

Dark green magnesian serpentine, called *pietra di garbo*, or gabro,* is got near Prato, at Impruneta, and in other parts of Tuscany. It is employed, along with white marble, in facing the outer surface of some of the old churches in Florence, disposed in the form of pannels and other ornaments, being set off and rendered conspicuous by the white

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* It is also called Verde di Prato, from the place where the quarries are In the territory of Genoa, also, magnesian serpentine is wrought, and called Polzevera, that being the name of the place where it is quarried.

marble, which composes the rest of the incrustation. The marble of Serravazza, near Carrara, which is sometimes used in Florence for columns and other decorations, has veins of a purple colour. The varieties of Serravazza marble resemble some of the antique marbles, Pavonazzo, Africano, Fior di Persico, and sometimes pass by these names. The marmo paesino, or landskip marble, called Florentine marble, got near Florence, is a limestone of a grey colour, with dark-coloured dendritical veins, which look like the picture of ruins, when the stone is cut and polished; it is only got in pieces of a moderate size.

The buildings in Florence are solid, with thick walls. The dark-coloured stone of the secondary strata, in the hills near Florence,* is much employed in building. Brick is also used.

The great houses, or palaces, generally have within the building a court, with a colonade or loggia round it on the ground floor. This court is often of the small dimension of twenty four feet square. The whole edifice has a heavy and gloomy appearance, arising both from the dark colour of the stone, and from the style of architecture.

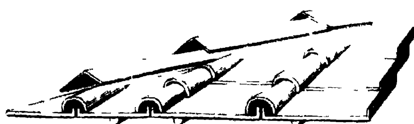
The style of the great mansions, or palaces, in Venice is very different from those in Florence, and quite

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* This stone is called, in Florence, Pietra forte; and from its bluish grey colour, Pietra serena. Pietra bigia, grey stone, is another variety.

ROOF TILES

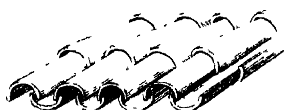
used at Florence and Rome page 203

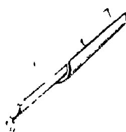




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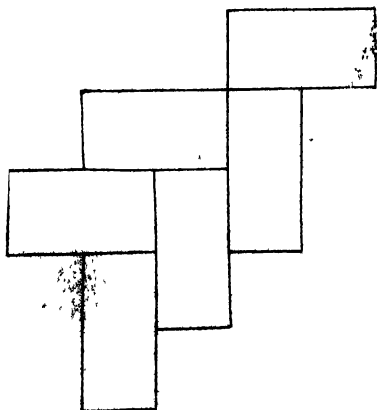
used at Trieste at Venice and at Lombardy page 203



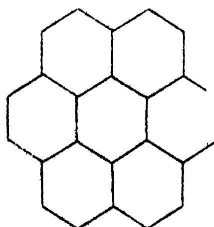


TILES of the FLOORS of ROOMS,

used in Lombardy Tuscany and Rome page 203



used in Paris



peculiar to Venice. They are lofty, generally with three tier of high arched apertures and balconies on the front, for the purpose of looking on the great canal. The fronts are of unpolished Istrian marble, which is of a light colour, producing an agreeable and cheerful effect in the exterior of a building.

The roofs at Florence are of a low pitch, and covered with tile. Every roof is covered with tile of two different forms,—a flat tile, with ledges on the side, and a tile nearly semi-cylindrical, but a little tapering upwards, which covers the interstice between the ledges of the flat tiles, and is named canale. These tiles are are also used at Rome, and in many other parts of Italy; and tiles are found in ancient Greek and Roman buildings, of a similar form, and sometimes made of marble. The tiles at Trieste and Venice are all of the tapering cylindrical form, a tile, with the convexity outwards, being laid, so as to cover the edges of two tiles, of which the concave side is outwards. The rooms at Florence are lofty, and are not all provided with fire-places. Floors of rooms are usually of large oblong rectangular tiles, placed in the herring-bone form, named spina di pesce in Italy; and testacea spicata, by Vitruvius, the same form in which the small hard bricks called Dutch clinkers, are laid in Holland and in Britain. The walls of rooms are painted with landscapes, or parterres as

seen through colonades, and with other ornaments; the ceilings also are painted with ornaments.

Libraries.

Another of the splendid collections, made by the Medici family, is the library of manuscripts, called the Bibliotheca Mediceo Laurentiana. The building, in which these manuscripts are kept, forms one side of the court of the monastery of San Lorenzo. It is after the design of Michael Angelo; and the singular form of ornament he made use of is seen in none of his works more strikingly, than in the vestibule of the Mediceo Laurentian library, which is adorned with columns, having capitals of a peculiar form.*

In the fifteenth century, at the period that immediately preceded the use of printing, the princes who encouraged the arts in Italy were active in collecting manuscripts of ancient Greek and Roman authors. In consequence of this, many remarkable manuscripts were discovered in the monasteries of Saint Gall in Switzerland, of Montecassino in the kingdom of Naples, and other monasteries.

* The peculiar style of Michael Angelo is also visible in his other architectural works,—the Capelia de' Depositi at San Lorenzo at Florence,—the part which is his of Saint Peter's Basilic,—the Capitol,—the Porta Pia,—and Porta del Popolo at Rome,—part of the Farnese palace.

Cosmo de' Medici Pater Patriæ, collected many, and formed a public library in the monastery of Saint Mark at Florence.*

Lorenzo de Medici collected a great number of manuscripts, and sent John Lascaris to Sultan Bajazet for that purpose.

Pietro, the son of Lorenzo, having shewn himself hostile to Charles VIII. of France, was driven from Florence, and the library, collected by Lorenzo, was pillaged by the French. The books that were saved, together with Saint Mark's library, were bought, and removed to Rome, by Cardinal John de' Medici, afterwards Leo X. Clement VII. de' Medici † restored the library to Florence; and, by his orders, Michael Angelo began the building at Saint Lorenzo for its reception, which was finished under the inspection of Vasari in 1571, in the reign of the Grand Duke Cosmo I.

Amongst the remarkable manuscripts, there is one of Virgil of the fourth century in Roman capitals, not very different in form from the letters on an-

* See the preface to the catalogue of the Biblioth. Mediceo Laurentiana, by the Canons Biscione and Bandini.

† There were three Popes of the Medici family,—Leo X., who died in 1521; Clement VII., who died in 1533, and Leo XI., who died in 1605, after a very short reign. Pius IV. was of a Milanese family of the same name, but distinct from the Medici of Florence.

cient Roman marbles; it is on vellum of the size of a small quarto, with notes; the notes written in the fifth century by the Consul Turcius Rufus Apronianus, as his signature attests. This is one of the most ancient legible manuscript books in Europe, of which the period is authentic. The manuscript of Virgil, in the Vatican library, with paintings, was said to be of the fourth century, of the time of Constantine. The manuscripts of the middle ages are no longer in Roman capitals, but in letters resembling in some degree the small Roman printed letter now in use; and, at a still later period, the manuscripts are in a running hand.* This library also possesses the celebrated manuscript of the Pandects, supposed to be of the time of Justinian in the sixth century, written in capital letters, which vary a little from the capitals on ancient Roman marbles; it is on vellum of the size of a large folio book; it was brought from Pisa, and Cosmo I. caused an edition to be printed from it by Lelio Torelli. A Tacitus, of the eleventh century, is in a running letter.

The library contains 7000 volumes of manuscripts. Many of them are chained to the desks.

The building, called the Ufizi, contains several public offices and courts of justice; and the upper floor is occupied by the gallery. It forms three

* See Maffei Verona Illustrata, parte terza, p. 246.

sides of a rectangle ; and on the ground floor is an open colonade or gallery for walking. The stones of the cornice of this colonade are wedge-formed, and combined like the stones of an arch, in order to free the architrave from weight, as in many buildings, ancient and modern, the architraves are cracked by the superincumbent weight. * The architect of the Ufizi was George Vasari.

In an apartment of this building is kept the Magliabechian library, a numerous and valuable collection of printed books, left for the use of the public, with an annual rent for its maintenance, by the celebrated Magliabechi. The collection has been augmented since his time by the addition of other libraries.

The number of books is estimated at ninety thousand. There is a large collection of the first printed books of the fifteenth century, and some manuscripts. The public have access to consult books in the library.

The bust of Magliabechi is in the vestibule. He was born at Florence in 1633, and died in 1714, at the age of 81. He was librarian to the Grand Duke, and passed his life sequestered amongst books, which were his sole occupation and amusement. He never was farther from Florence than Prato, a

* See Vasari Vite de' Pittori Introduzzione, and Architettura di Palladio.

distance of ten miles; and that journey he went only once, and for the purpose of seeing a manuscript. He retained in his memory the substance of the vast number of books he had read. His correspondence was extensive with men of letters, who consulted him on questions of literary history. He published some authors of the middle ages, but no work of his own composition.

Another library, open for the use of the public, is the Marucellian library.

Museum of Natural History.

Near the Palazzo Pitti is a building appropriated to the museum of natural history and of anatomy, the collection of philosophical instruments, and the astronomical observatory. The botanic garden is adjoining. These splendid collections were founded by the Grand Duke Leopold.

The museum of natural history contains a collection well arranged and named, of stuffed birds and quadrupeds, and preparations in spirits, of fishes, reptiles, worms. Amongst the minerals are fossil bones of elephants, found in *Val d' Arno Superior*, the bones of a hippopotamus, and the jaw-bone of a physiter whale from the same place.

The anatomical collection consists of a large series of representations of dissections of the human body, and of some dissections of animals, such as the dissection of the cuttle fish, the progress of the

growth of the chick in the fecundated egg of a fowl, the progress of the changes of the silk-worm, all modelled in wax. The wax is coloured, so that the model resembles the parts in colour as well as in shape. Many of these models were made by a female artist.

The Abbate Felice Fontana was director in 1771,* and promoted the formation of this part of the collection, and of the whole establishment.

The art of making wax models of anatomical preparations was practised by Italians in the end of the seventeenth century. Zumbo, a Siracusan, presented a wax model of a human head anatomized to the Academy of Sciences of Paris in 1701.†

The botanic garden is furnished with convenient hot-houses. The Chamærops humilis grows in the open air, and is the only palm that can endure the winter's cold in Florence. It grows, likewise, near the sea coast, in the neighbourhood of Genoa. In Rome, where the mid-day sun is nearly two degrees higher than at Florence, the date palm also thrives in the open air.

In the Grand Duke's collection of philosophical

* Fontana was professor of mathematics at Pisa, and afterwards mathematician to the Grand Duke. He published Researches on the Venom of the Viper, and some other treatises.

† See the History of the Academy of Sciences of Paris for the year 1701.

instruments, which is very extensive, are some of the instruments used by Galileo, and by the Academia del Cimento.* There is a curious series of old gnomonical and astronomical instruments. The modern instruments are mostly by London makers.

The observatory is a quadrangular tower, furnished with a large transit instrument by Sisson, and some other instruments. There is another astronomical observatory at the Scuole Pie, in the collegio di San Giovanni, where the Padre Ingherami makes observations. It contains a circle by Reichenbach of two feet, and another of nine inches by the same artist. The latter instrument is employed for the purposes of a geometrical survey now making of Tuscany.

In the vestibule of the museum are busts of Ga-

* The Academy of Experiment, Academia del Cimento, was formed in 1657, and assembled in the palace of Prince Leopold de' Medici, who was always present at the experiments The academy published, in 1666, an account of experiments in natural philosophy, Saggi di Naturali Sperienze fatte nell Academia del Cimento, of which there is a modern edition published by Targioni Tozzetti. Viviani, Toricelli, and Borelli, were of the nine who composed the academy Auzout, the French academician, and Steno, a native of Denmark, were present, and assisted in the experiments.

In 1667, some of the members having left Florence, and Prince Leopold being made Cardinal, the academy was dissolved, after an existence of ten years.

lileo and of Americo Vespucci.* An old terrestrial globe, three feet in diameter, placed in the portico, and now quite black, might, if cleaned, be interesting to the history of maritime discoveries. It is, I suppose, one of the globes made by Ignazio Dante.

The college of San Giovanni, called San Giovannino, is occupied by the religious order of monks of the Scuole Pie, who are employed in teaching the various branches of knowledge from the elements upwards. The observatory of the college is under the direction of the astronomer Father Inghirami, and is furnished with good modern instruments, as before mentioned. This college of San Giovanni formerly belonged to the Jesuits, and was founded by them in 1551, eleven years after Loyola's order had received the papal approbation from Paul III. Farnese. The college is a considerable building, but the ambitious order of Jesuits has not left such splendid fabrics at Florence as those which shew

* Amerigo Vespucci was born near Florence in 1451, and lived to the age of 65. He went in the capacity of astronomical observer in an expedition fitted out by the Spanish government. This expedition landed on the main land, since called South America, which Columbus had discovered a year or two before. Amerigo was employed to draw the charts of the new discoveries, and in these charts he called the terra firma by his own name America.

the wealth and power they attained to in Rome, Venice, and Prague.

Amongst the men eminent in natural science now living in Florence are, Fabroni, the celebrated chemist; Targioni Tozzetti, author of Viaggi per la Toscana, 1760, Travels in Tuscany, in which he treats of the physical topography and natural productions; Nesti, professor of mineralogy, who has published Observations on the Fossil Bones found in the upper Val d'Arno; Ingherami, professor of astronomy at the Scuole Pie.

The academy della Crusca published the first edition of their vocabulary of the Italian language in 1612.

In the eighteenth century, the academia della Crusca, the academia Flerentina, the academia degli Apatisti, were united into one under the name of the Academia Florentina, by the Grand Duke Leopold, afterwards emperor. There is an agricultural society, l'academia degli Georgofili.

From the 1st to the 20th of January, Fahrenheit's thermometer, on the outside of a window in the shade, stood from 33° to 47° at eight in the morning. Of these twenty days ten or eleven were without rain, and several of these were clear with few clouds. The distant hills were covered with snow, which is the case six or seven months in the year.

The cold in Florence now, in January 1818, is such that fire is often required in rooms in the morn-

ing and evening. In the afternoon the heat of the sun is considerable, and produces an agreeable warmth. The common people make use of a *scaldino*, an earthen pot containing burning charcoal; this vessel they carry in their hands for the sake of warmth. Men of the better classes, when they go out in winter, wrap themselves in a great-coat with many capes, called *pastrano*; this is used also in Venice, Rome, and other towns.

The plants that are cultivated and indigenous in a country, serve as an indication of the prevalent degree of heat and cold.

Orange trees scarcely bear the winter's cold without covering in Florence, although there are some planted in the open ground in the courts of the monasteries. At Rome, nearly two degrees farther south, orange trees bear the winter's cold, but lemon trees, citron, and some other varieties of the genus Citrus, are covered in winter by houses formed of reeds. On the Boromean islands in the Lago Maggiore, two degrees north of Florence, orange and lemon trees require to be covered with houses of boards during six months of the year. The Chamærops humilis is the only palm that endures the winter's cold in the open air in Florence. There are two kinds of cypress planted in the gardens at Florence, the *Cupressus sempervirens*, with erect side branches, and the *Cupressus dispersa*, with side branches nearly horizontal. The cypresses grow to

the height of sixty or seventy feet. Their tapering form and dark green colour render them a beautiful ornament to the gardens and country houses. The cypress is a coniferous tree, but its wood is heavier than the wood of fir and several other pines, and from the longitudinal disposition of its fibres resists being broken across. It is, therefore, used at Florence for making window-frames and bars. The cypress was introduced into Italy from Crete, as Pliny relates. *

Most of the ground moderately elevated in the neighbourhood of the city is planted with olive trees, some of which are of a great age, and bear fruit, although the wood in the interior of the trunk is quite decayed; they are planted like fruit trees, in an orchard, and wheat is sown under them. Fig trees also are cultivated.

Vines are trained on trees in fields sown with wheat or other grain, and they are not cultivated in vineyards solely appropriated to the culture of the vine, as in Burgundy and Austria.

The common wine met with in Florence and in Rome has little flavour. The more esteemed kinds are the Monte Pulciano, the Orvieto wine, and the Aleatico.

The Monte Pulciano, the best of the Tuscan wines, is compared by the English to a weak claret,

* Plin. Hist. Nat.

without any particular flavour. The Tuscan wines do not bear carriage, and do not keep long. They are sometimes sent to Britain in the thin glass flasks woven round with plaited straw, and with a little oil on the surface of the wine, to exclude the air; this method is not so favourable for keeping the wine as the green bottles well corked.

Wine from the proprietor's estate is sold by retail in some of the large palaces in Florence; they have a little window or wicket in the wall just large enough to admit the flask which the purchaser hands in to be filled.

Chesnut trees are cultivated in the mountainous parts of Tuscany, of the dutchy of Modena, and in other parts of the Apennines, and no grain being produced in these elevated situations, chesnuts constitute a principal part of the food of the mountaineers. Chesnuts are mentioned as the food of the country people in Italy by Virgil. * It is on the ground of a middle elevation, and not on the highest of the mountains, that the chesnut trees grow. The large-fruited kinds are propagated in Tuscany by inoculation. A great part of the chesnuts are dried, they are then hard, and may be ground into meal. Of this meal, mixed with water and baked in a pan over the fire, a mass of paste is made which is used

* Virgil. Eclog. I.

as food. Its taste is sweetish. It is met with in Florence, Bologna, and Modena. In Tuscany it is called Polenta, a name which, in the north of Italy, is applied to a paste of a similar consistence made of the meal of Indian corn.

The kernels of the nuts of the Pinus pinea are commonly eaten in Florence, and used as a dessert after dinner.

Different kinds of garden-stuffs, which in Britain are only produced in summer, are to be had all the year round in Florence and other parts of Italy. Flowers of ranunculus, violet, narcissus, hyacinth, pink, and others, are sold commonly in the market at this season—January.

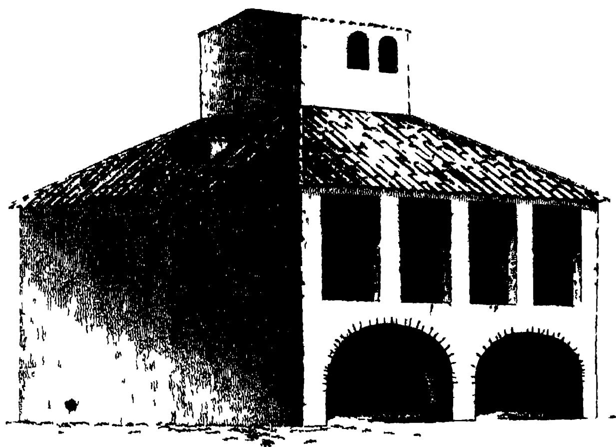
In the hedges about Florence grow the Mespilus pyracantha, box, the Laurus nobilis, Viburnum tinus, called Laurus tinus, a kind of Smilax. The caper bush, Capparis spinosa, grows in the crevices of the walls of the town.

Near Pistoja, going up towards the hills, are the following plants: Vinca minor, or periwinkle; Ulex Europeus, furze or whin; Spanish broom, Clematis vitalba, Cistus Italicus, a foot in height, Heleborus viridis.

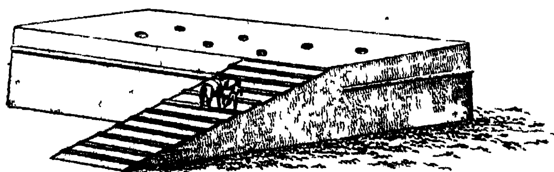
The public granary is a mass of masonry about twenty feet high, and containing pits or cavities which have their aperture on the flat top or platform of the edifice. Each aperture is round, and of a diameter sufficient to allow a man to go into the pit.

XI

Farm-house between Florence and Pistoja



Granary at Florence. page 216



W.A.C. del

Lizars Sculp! Edinburgh.

Edinburgh. Published by A. Constable & Co. 1820.

When the pit is filled with grain the aperture is covered with a stone made to fit, and the top of the building is so disposed that rain-water runs off and does not get into the grain-pits. From the ground to the platform there is an inclined plane with low rounded steps (a scala cordonata) by which horses carry the grain to the pits.

Inlaid Work in Agate.

At the 1500, that period when the arts were at the highest in Italy since their revival, several artists wrought in agate and rock crystal; of these materials they made cups and vases, many of which are seen in one of the rooms of the gallery of Florence. They also made cameos; and Vasari gives an account of several of these artists and of their works.

At the same period the art of Tarsia or inlaying in wood of different colours, so as to form the representation of buildings in perspective, was practised at Verona and in Florence, as Vasari mentions.

From a combination of the arts of working agate and rock crystal, and of inlaid work, is formed the art of inlaid work in agate (*lavoro di commesso, lavoro d'intersecatura*) now practised in Florence.

In this manufactory, carried on at the expence of the Grand Duke, agates and other hard stones are cut into various figures, so as to form, when put together, a flat surface exhibiting a picture of shells, flowers, foliage, or other objects. This kind of pic-

ture differs essentially, and in many respects, from Mosaic; the pieces of agate have a considerable surface, and are cut into the form of the outline of the object, and the colour of each piece is not uniform over its whole surface; whereas, in Mosaic, the pieces of enamel are small and all nearly of one form, most frequently square on the surface, and each piece is of one colour. Mosaic is suited to represent the most finished pictures with many variations of tint and shade. Inlaid agate is only fit for simple designs, composed of outline and a few colours, without a gradual passage from one colour to the other.

The stones chiefly employed are,—agates of a light colour, for the enlightened parts, and darker coloured agates for the shadows; sometimes the piece of agate is light coloured in one part and dark coloured on the rest of its surface, and is employed to represent a body partly enlightened and partly in the shade,—chalcedony and jasper of different colours, —lapis lazuli, and other stones suitable by their colour, hardness, and polish. Antique red porphyry is frequently employed for the ground of the tables. Some stones of less hardness, but distinguished by their fine colour and polish, are also used, such as antique yellow marble, oriental alabaster, and others. Likewise substances not of the mineral class, mother-of-pearl shell, and red coral.

Formerly, pictures of buildings and human figures were made in this way, such as a View of the Pan-

theon,—a View of the Tomb of Cecilia Metella,—Sculpture represented by a Sculptor at work on a Statue of Apollo, &c. These pictures are about two feet long. But this inlaid work is not capable of the details of outline, nor the gradation of colour requisite for these subjects, so that, after much labour and expence, the effect of a pleasing imitation is as far from being produced as in the most ordinary and cheapest print.

But the subjects now chosen admit of a better imitation in inlaid work. These subjects are shells, corals, flowers, vases, and grotesque foliage. They are generally disposed so as to form a table, and produce a beautiful effect. A round table of this kind, with grotesque foliage, is admired in one of the rooms of the gallery; and several fine tables, ornamented with figures of shells and corals, are in the Pitti Palace, and were in the gallery of Apollo in the Louvre, during Bonaparte's reign.

The agates and other stones are slit by a bow with an iron wire and emery, into slices about an eighth of an inch thick. This iron wire effects the same purpose as the thin iron wheel used by our lapidaries. The slices are then polished, and afterwards they are cut by the wire into the form requisite for the design of which the piece makes a part. The different pieces that form the picture of a shell or other object, are put together and cemented on a slab of sandstone half an inch thick, which forms

a temporary base. When all the ornaments of a table are done, pieces of antique red porphyry, cut into slices of the same thickness as the agates, are so adjusted as to cover entirely the table which it is proposed to form. Out of this ground of porphyry pieces are cut by the wire, and taken out, exactly of the form of each picture or ornament. The pictures are then taken off from their temporary base, and the porphyry ground being cemented on a slab of sandstone of the size of the table, the pictures or ornaments are cemented in the vacuities of the ground. The cement used is a composition of wax, turpentine, and resins.

Copperplate Engraving.

Vasari relates, that the first who took impressions from an engraved plate of metal in Florence was Maso (that is Tomaso) Finiguerra, a Florentine goldsmith, who flourished about the year 1460. It was the fashion at that time to have casquets and silver boxes engraved with designs cut by the graving tool, and the engraved lines were afterwards filled up by running into them a melted sulfuret of silver, called Niello, the composition of which is given in the printed works of Benvenuto Cellini. Maso took impressions in clay from the engraved silver plate, and on the clay he cast melted sulphur; the lines on the sulphur he filled with lamp black, and from these, on a moist paper,

rolled on a wooden cylinder, he took an impression. After this, Andrea Mantegna, about the year 1490, had his own pictures engraved in Rome. Albert Durer, excellent in his engravings both on wood and copper, as well as in his paintings, flourished in the year 1500, and his works were so much in request, that Marc Antonio Raimondi of Bologna counterfeited his engravings, and his mark, and sold the counterfeits at Venice, for which Albert Durer sought redress from the tribunals of that city.*

In the seventeenth century, two natives of Florence were celebrated as copperplate engravers, Antonio Tempesta, known by his engravings of hunting scenes and wild beasts, pupil of the painter, Santi di Tito; and Stefano Della Bella, who passed part of his life in France, and engraved the Siege of Arras, of Saint Omer, &c.; Della Bella also painted, and some of his pictures are in the Louvre gallery.

Many fine engravings, after celebrated pictures, have been executed in Florence of late years, by that excellent engraver, Raphael Morghen, and his pupils.

Alabaster Figures.

There are several *studii*, or manufactories of

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* Vasari, Vita di Marc Antonio Bolognese.

small statues, and other ornaments, sculptured in white gypseous alabaster. This alabaster is brought from Volterra, and other parts of Tuscany. It is more easily cut than Carrara marble. It is not got in large blocks; the largest statues made of it are about two feet in height.

Carrara marble excels all others that are at this day quarried in Europe for the purpose of the statuary, by reason of the large sized blocks that can be obtained. Those from which Michael Angelo's David, and Bandinelli's Hercules, in the Piazza del Granduca, were made, were about twenty feet high, by ten feet square. The Carrara marble is also, for the most part, free from fissures, and from veins of quartz, both of which are hurtful to the sculptor, although sometimes cavities occur in it filled with quartz crystals, of a beautiful lustre and transparence, which are to be seen in many collections of minerals. Many antique Roman statues are of marble from Carrara, anciently called Luni. The marble of which the Greek statues are made is from Paros, and from Mount Pentelicon near Athens.

The gypseous alabaster does not endure so long as marble, when exposed to the weather; the sulphate of lime, of which it consists, being more readily dissolved and corroded by the rain than the carbonate of lime, which constitutes marble. At Leghorn, also, there is an establishment where these alabaster statues are sold.

Manufacture of Earthenware.

Pliny states, that Etruria was the first country of Italy in which the art of making pottery was practised, and that the art was afterwards carried to the greatest perfection there; and Arezzo was particularly celebrated for this kind of manufacture.

The ancient Romans made much use of vessels of earthenware, called amphoræ, for keeping wine; wooden casks, however, were employed for transporting wine, as appears from the waggons loaded with casks represented on the column of Antoninus. At Madrid, at this day, wine is kept in earthen vessels, and not in casks. *

It is uncertain whether the antique ancient earthen vases, painted with mythological subjects, were made in Etruria; most of them have been found in the kingdom of Naples, and in Sicily, as before mentioned, when speaking of the gallery. After the revival of the arts in Europe, several ingenious artists, in different countries, ameliorated the manufacture. Castelfranco, at Faenza, in the beginning of the sixteenth century, manufactured the Majolica, or earthenware, decorated with designs after Raphael and Julio Romano, specimens of which are preserved in many collections. In France,

* See a paper of Percy, member of the Institute of France, published about 1800

Bernard de Palissy, versed in the chemical knowledge of his time, improved the art of making Fayence. Bottcher, an apothecary at Dresden, produced two or three kinds of pottery, one of which is of a brownish red colour, semivitrified, and so hard as to receive a polish on the lapidary's wheel, and in that way to acquire the lustre of glazed earthenware; cups, and other vessels of this singular earthenware, are seen in the Japan Palace at Dresden. In 1709,[*] Bottcher first composed the white porcelain in imitation of the Chinese, which is now made at the King of Saxony's manufactory at Meissen. Other manufactories of porcelain of a semivitrified body, like the Chinese, have been established at Sevres, Paris, Berlin, Vienna, Naples, Florence, Vicenza, in Staffordshire, Worcester, &c.

The decomposed white granite of Limoges, of which the French porcelain is made, and the decomposed white granite of Cornwall, were found to be similar to the materials used in making porcelain in China, so that, with this material, the Europeans have been able to form a porcelain in imitation of the Chinese, and having the same semivitrified body. The most considerable manufactory of this kind of porcelain is the manufactory at Sevres, near Paris, which belongs to the French government.

[*] Engelhardt, Erdbeschreibung von Sachsen.

Wedgewood, and other Staffordshire manufacturers, have produced the English stone-ware, made of white pipe-clay, much lighter and better glazed than the Delft, Fayence, and Majolica. These three kinds of pottery resemble each other; they are thick and heavy, and composed of a clay which burns to a yellow, or light red colour; they are still in use in many parts of Europe. The manufacture of English stoneware is now introduced into several places of France and Italy.

Amongst those who have distinguished themselves in the manufactory of earthenware, is Luca della Robbia, a Florentine goldsmith and statuary, born in 1388. He made heads and human figures in relief, and architectural ornaments of glazed earthenware, *terra cotta invetriata.* These figures were employed in the decoration of buildings, and many of them, the works of the Della Robbias, are seen in the churches of Florence to this day. They are in a good style of sculpture, the colours of the glazing are white, blue, green, brown, and yellow. The art of making these glazed earthen figures invented by Luca, was taught by him to his brothers Ottaviano and Agostino, and was afterwards practised by his nephew Andrea; but the family and the art became extinct in Florence about the year 1560. *

* See Vasari, Vita di Luca della Robbia.

Other artists in unglazed terra cotta were, Andrea da Sansovino, master of the celebrated sculptor and architect Jacopo Sansovino; Antonio Begarelli, of Modena, who died in 1565, and whose works were highly praised by Buonaroti, as Vasari relates in his Life of Buonaroti.

Stoneware, after the Staffordshire manner, and porcelain, of a pretty good quality, are made at Doccia, near Florence, at the manufactory of the Marquis Ginori. The porcelain earth is not got in the country, but imported from Vicenza. This manufactory of porcelain has been established upwards of fifty years.

Large vessels of red earthenware are made at Florence and in other parts of Tuscany for holding oil and other purposes; some of them are four feet high. They are not made on the potter's wheel, but are formed of rolls of clay, built up one over the other, round a conical form of wood. The large oil jars are contracted at the mouth, and are made in two pieces, which are joined whilst the clay is wet. Large earthen jars of this kind are also made at Rome; and in Spain they are made, and used at Madrid for holding wine in place of wooden casks.

Glass Manufactory.

At a small glasshouse in Florence, the flasks for wine and oil, known in England by the name of Florence flasks, are made, and other vessels of thin

glass. There are glasshouses also in Bologna and Rome for making the thin wine decanters, and other vessels commonly used in Italy. Some stronger vessels of white glass are imported from Bohemia.

Silk and Woollen Manufactory.

A considerable quantity of silk is grown in Tuscany; and flowered silks, like those of Lyons, are manufactured at Florence. The apartments of the Palazzo Pitti are hung with these Florentine silks, the floors are covered with carpets made at Florence. There are also manufactories of coarse woollen cloth in the city, and several high open edifices are seen in the town, called *Tiratoii,* for exposing the cloth on tenters. Formerly the woollen manufactory was one of the principal branches of trade of the place.

Essences.

Essence of orange flowers, and other vegetable essential oils, are obtained by distillation in Florence, and are exported from Leghorn to Britain, and the north of Europe; as are also the preserved citrons, plums, &c. made at Florence. A particular mixture of preserved fruit bears the name of Mostarda de Frutti.

Straw Plaiting.

The Tuscan straw hats are superior to those of any other country in Europe, and the plaiting of

straw for hats occupies the countrywomen and girls in the neighbourhood of Florence. They have straw assorted into many different kinds, according to its fineness, the one kind gradually more slender than the preceding. The wheat for producing this straw is sown in March, and is cut before the grain is ripe.

Coins.

In 1252 was first coined in Florence the Gigliato, a money so called from the figure of the lily, the arms of Florence, with which it was stamped. The Fiorino also derives its name from the flower impressed on it.

The coins most common in circulation in Florence are, The *Scudo* or Francescone of silver equal to 10 paoli value in English money, about $53\frac{6}{10}$ pence. The half scudo of silver equal to 5 paoli. A coin of silver of 2 paoli. The *paolo*, a silver coin, its current value in English money is $5\frac{36}{100}$ pence. The *crazzia*, a small and very thin coin of copper, mixed with a little silver, equal to $\frac{1}{8}$ of a paolo, and its current value in English money is $\frac{67}{100}$ of a penny.

Hospitals.

The hospital of Santa Maria Nuova for the reception and treatment of sick is large, containing 600 beds for male, and 600 for female patients, and appears to be kept in good order. The beds, of which there

is one for each patient, are disposed in long and spacious rooms, in two rows, one row on each side of the room; these rooms are on the principal floor, and have no floor above them. The hospitals at Rome are built in a similar way. The sick are waited on by nuns, a custom which prevails also in the hospitals in France, where the *Soeurs hospitalieres* did before and during the revolution, and still continue to perform the duty of waiting on the sick. They even assisted in the ambulatory hospitals of the army, and during the war in France in 1814, the Soeur Marthe was so distinguished by her activity and skill in the care of the wounded, that she attracted the notice of the allied sovereigns, and was presented with the decorations of their orders. There are also friars who wait on the male patients in the hospitals at Florence. Attached to the hospital of Santa Maria Nova is a school of medicine, and a small botanic garden. The sick or wounded are carried to the hospital by the members of the charitable company or fraternity *della misericordia*, who are inhabitants of Florence of the class of tradesmen, and voluntarily perform this office. Whilst on duty they are covered, so that they cannot be known, having a black cloak and hood, which covers the face with two holes left for the eyes.*

The confraternities for charitable purposes in Italy had

Another large hospital is that of Bonifazio. It is allotted for the reception of patients affected with chronic diseases.

The hospital degl' Innocenti is for the reception of children that are exposed.

There is a workhouse in Florence, to which all individuals found begging within the city are transferred,—an institution introduced by Bonaparte, who also suppressed public street-begging in Paris. Prostitutes are not allowed to appear in the streets in the evening; a regulation which is also enforced in Rome, Bologna, and other towns of the Pope's territory.

Florence is surrounded by a wall, with square towers, in the old manner of fortification, which was sufficient before the use of cannon. In the circuit of the wall there are two forts, with pentagonal bastions in the more recent style. One of them, the fortezza di Belvedere, constructed in 1500, under the direction of the architect Buonta-

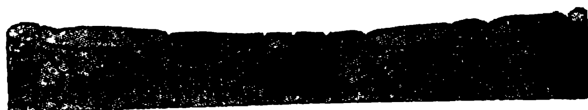
their origin in the middle ages, and resembled in some degree the Sodalitates of the ancient Romans, such as the Fratres Arvales, the Septemviri Epulonum, and others. The confraternities were very numerous in Italy before the last invasion of the French, there was, at least, one in every town, and several still exist. Each confraternity assembles in a particular church

' The Scuole Grandi in Venice, which were amongst the most considerable of the confraternities in Italy, originated in

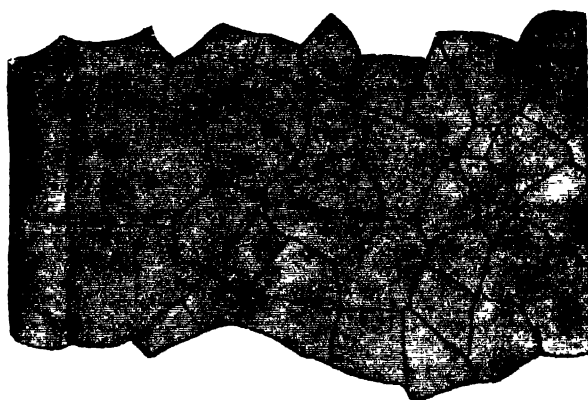
[Page 231, Vol I.]

Pavement of the Streets of Florence.

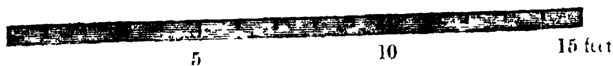
Vertical Transverse Section.



Horizontal Plan.



Breadth of the Street.



Drawn by H A C

Etched by Lizars

lenti, is situated on the elevated ground to the left of the Arno, near the Boboli garden; the other, the Castello San Giovanni, is a pentagon on the northern part of the wall.

The streets are rather sparingly lighted at night, the lamps being too distant, about 500 feet from each other.

The pavement of the streets, which was begun in 1250, by the architect Lapo di Colle and his son, is formed of a stratified stone of a secondary formation, somewhat of the nature of sandstone, called pietra forte, and from its grey and bluish colour, pietra bigia, pietra turchina. These different names are applied to different strata of this kind of stone, according to their colour and other qualities. The building stone of Florence is from the same quarries. The stones employed in paving the streets, when taken from the quarry, are nine inches or a foot in thickness; the upper and under surfaces plane and nearly parallel. They are irregular polygonal prisms. The upper surface of each is equal

the twelfth century. The word schola was used by the ancient Romans to denote a corporation of tradesmen, as was also the word universitas, and the members were called scholares. From this application of the word schola, it came afterwards to denote the societies for works of mercy at Venice. See Muratori Antiquitates Italicæ medii ævi dissertatio 75, de piis laicorum confraternitatibus

to two or three square feet. In order to form the pavement, these stones are laid in mortar; and after they are laid, the surfaces of the different stones are hewn into one plane by the chisel. Lines are also drove with the chisel, to render the surface less slippery for horses. When a new stone is to be put in, the worn-out stone being taken out, the edges of the adjoining stones are cut, so as to give the opening the form of the new stone that is to be inserted. The pavement of Florence is kept in good repair. The pavement of Pistoja and other towns of Tuscany, that are within reach of quarries of this kind of stone, is similar; as is also the pavement of Trieste, in the neighbourhood of which strata of this stone occur.

The Italian used by good writers, and in the conversation of the better classes, is called by Dante Volgare Illustre.

This book and conversation language was founded upon the Tuscan dialect, because the principal authors, at the revival of letters, Dante, Petrarch, and Bocaccio, were natives of Florence. After

* See Dante de Vulgari Eloquio, Paris, 1572, a work in which the author enumerates fourteen different dialects of Italian, which are very much altered by political changes and other causes since his time Some of them have become less coarse. The Neapolitan is the least changed. Fontanini della Eloquenza Volgare, is a commentary on Dante. Ven. 1737. See also Adelung's Mithridates.

Dante's time, therefore, it was called Tuscan, lingua Toscana or Fiorentina.

The great reputation of the writings of these three authors occasioned their language to be generally adopted, and in particular the extensive circulation of the Decameron, or Tales of Bocaccio, of which Mazuchelli enumerates ninety-seven Italian editions.

The reputation of the Florentine written language was fixed by the flourishing state of Florence under the Medici family.

The Florentines have shewn much jealousy in respect to the origin of the Italian written language; and, in 1717, Girolamo Gigli, who called in question the claims of Florence, and asserted those of his native city of Siena, was condemned to have his work, Vocabolario delle Opere di Santa Caterina de Siena e della lingua Sanese, publicly burnt, himself expelled from the Academia della Crusca, and banished, at the request of the Archduke, forty miles from Rome.

The pronunciation of Italian in Florence is peculiar. The c is pronounced like the German ch, in the word bach. Cavallo is pronounced havallo; casa is pronounced hasa.

The Tancia, a comedy by Michael Angelo Buonaroti, nephew of the great artist Buonaroti, is written in the language of the common people of Florence and the vicinity.

Benvenuto Cellini's life contains many peculiar words and phrases, and is considered by Adelung as an example of the provincial dialect of Florence in the beginning of the sixteenth century.

In the fifteenth, but chiefly in the sixteenth century, the societies called Academie were frequent in different towns of Italy. The greatest number were meetings held periodically, at which the members read verses of their composition, discourses and essays on literary subjects, and held literary conversation; some collections of these verses are published, and lives of the eminent members, as those of the Arcadi of Rome.* Some were instituted for promoting music, painting, architecture, and other arts and exercises. The Academia della Virtu was instituted at Rome in the sixteenth century, by Claudio Tolomeo, a poet and man of letters, for the purpose of illustrating the writings of Vitruvius. The Academia de' Lincei, at Rome, was for the study of natural history. The Academia de' Filarmonici, at Verona, for music. The Academia Olimpica, at Vicenza, for theatrical representations. The Academia della Cavalerizza of Vicenza for riding. Some academie attended to natural philosophy, as the Academia del Cimento, at Florence, in the seventeenth century. The Aca-

* Vite degli Arcadi Illustri.

demia della Crusca of Florence was employed in the Italian language in the sixteenth century.

Many of these *academie* were very inconsiderable. The names they adopted are singular, and often not in praise of the academy. There were in different towns of Italy, the Academia degli Infiammati, de' Transformati of Milan in the sixteenth century, de' Costanti, degli Occulti, degli Intrepidi, degli Affidati of Pavia in the sixteenth century, degli Insensati of Pistoja, and a multitude of others.* The name of the academy was connected with a device and motto, (impresa.) That of the Academia degli Incogniti of Turin had for its device a picture, covered with a green veil, with the inscription, Proferet ætas. The Academia della Crusca of Florence, the picture of a bolting machine, which separates the fine flour from the bran, the word crusca signifying bran. In the sixteenth century, devices were much in fashion also for individuals; and every person that thought himself of some note, and above the vulgar, had a device and motto.

One of Goldoni's comedies contains a lively and humorous representation of the *academie* for reading verses. The word academia is often used in Italy to denote an evening party for the purpose of conversation. Academia di musica is a concert.

About the middle of the sixteenth century, three

* See Tiraboschi st. dell lett. Ital

academie, or societies,* were formed at Florence for the encouragement of theatrical representations, the Academia degli Infocati, degli Immobili, and de' Sorgenti. Each had a theatre, and each strove to excel. Some of the theatres now in Florence belong to societies, called Academie, who let them out to companies of comedians.

Dramas in music, with recitative, (called Il cantar recitativo, il cantar senza cantar,) came into use in Italy at the end of the sixteenth century. Giulio Caccini was the inventor of recitative, and composed the music for the first musical dramas. The words were written by Rinuccini; and his Eurydice was represented at Florence in 1600, at the celebration of the nuptials of Mary de' Medici with Henry IV. of France.

During the Carnival, which was this year (1818) from the 1st of January to the 1st of February, its duration depending on the time that Easter happens, there were in Florence representations almost every evening in seven different theatres. These were the Pergola theatre, where musical operas are performed; three or four theatres, where comedies of Goldoni and others, and tragedies of Alfieri were acted; the rest, in which plays were performed, and farces interspersed with songs, *cantilene di trivia*, were lesser theatres, with inferior performers, and

* See Tiraboschi St. dell' lett. Ital.

the price of admission small. None of all these theatres is very remarkable for the size or beauty of the house. At other times, out of the Carnival, performances are exhibited on two only of the theatres.

During the Carnival, there were public masked balls in a room adjoining to the Pergola theatre; and masks walked the quay by the side of the river, called Lung d'Arno, some time before sunset. It is mostly women that are masked; the better sort dressed in black dominos, others as *contadine*, *montagnare*, country girls, inhabitants of the mountains, as *pazze* or romps; some of the common people are as harlequins, &c.

There are many inns and hotels of various magnitudes for the accommodation of travellers in Florence. Schneider's is the most noted, being a large handsome house, on the left bank of the Arno, with an establishment on a great scale.

From the Monastery of the Franciscans, situated on the highest part of the eminence, there is an extensive view of the country to the west, through which the Arno runs; Florence is seen below, and Pistoja is perceived in the distance; to the north, to the east, and to the south, the view is composed of mountains. This monastery is occupied by monks of a mendicant order, and, in different places of Tuscany and the Pope's territory, communities of mendicant monks begin to re-establish themselves, living on the alms they collect. A Franciscan is frequently seen on the road followed by a horse to carry the bread, grain, and other articles he obtains from the devotion of the farmers. The monastic societies of women and men engaged in the care of the sick, and the *Scuole Pie*, at Florence, a society employed in the education of youth, were found to be useful, and therefore have subsisted amidst the general suppression. The Jesuits are reinstated, and have a college for the purposes of education at Rome. Most of the other orders who subsisted without direct and daily begging, have not yet been able to collect funds for their re-establishment.

Florence to Pistoja.

The road from Florence to Pistoja passes through a plain and highly cultivated country, four to six miles in breadth. The hills which confine this valley of the Arno are mostly bare of wood, and rocky,

with snow on the highest parts of those to the north, now, on the 14th January 1818. Olive trees are planted on the lower part of the rising grounds.

Every foot of the plain is carefully cultivated. The fields are planted with the white mulberry tree, called in Tuscany *Gelso*, the leaves of which are brought to market in the spring, and sold to those who rear silk-worms. The ground under the trees is occupied by wheat, now green, and sown on narrow ridges about eighteen inches broad, with deep furrows between the ridges. A good deal of flax is grown here, and is now, at this season, six inches high. Poplar, and other pollard trees, with vines trained on them, are planted on the edges of the fields, and formed into an espalier with reeds. The Arundo donax, a strong reed, eight feet high, is cultivated for the purpose of forming these espaliers, and for making pales for fences.

The fields are separated by ditches of running water, which are derived from torrents flowing from the mountains. These torrents are embanked on each side, to prevent their overflowing. The gravelly bed of the torrent is most frequently higher than the adjacent country.

The fields are generally dug with a spade, and not ploughed. Great attention is paid to the collecting of manure, in consequence of which, the streets of Florence are kept very clean. The dung

and dead leaves are carefully collected from the high roads.

The road from Florence to Pistoja is well made with river gravel, and kept in good order.

Pistoja.

Pistoja is a neat town, with some of the churches built on the model of those at Florence, amongst others a baptisterium, built in 1337 by Andrea Pisano, * like that of Florence and Pisa. In like manner in Padua, Pirano, and other towns situated in the territory which formerly belonged to the Venetian republic, the churches and towers are copied from the buildings of the same description in Venice.

Amongst the hills three miles from Pistoja are forges where iron is made into bars. The iron is brought in blooms, or irregularly shaped masses, possessing an imperfect state of malleability, from furnaces situated in the Maremma, a district on the sea-coast near the island of Elba, and the furnaces are supplied with ore from the famous mine in that island. † In the Maremma of Siena also there is

* Vasari Vit. di Andrea Pisano.

† The island of Elba is mentioned by Pliny, Hist. Nat. lib. iii. 12. "Ilva cum ferri metallis . . . a Græcis Æthalia dicta" The works supplied with Elba ore and those at Brescia are the principal manufactories of iron in Italy Mines of other metals are rare in Italy, although Pliny thinks it for the honour of the country to say that they exist, but the Senate, with a view of sparing the ground of Italy, would not

a vein which contains iron, copper, and galena, situated between the limestone and the shist; the copper was smelted and silver extracted from the galena in 1760. Sulphuret of antimony occurs in the same district.*

A mile nearer to Pistoja is an establishment where rods made at the forge are drawn out into iron-wire. The machinery is put in motion by the impulsion of water upon small wheels four or five feet in diameter. The motion thus produced is rapid, and does not require to be accelerated and transferred to another axis by toothed wheels, but the power of the water is much more completely obtained by an overshot wheel, as Smeaton has proved. Wire of various sizes is manufactured. After the wire has been drawn it is hard, and, in order to recover its flexibility, it must be heated and suffered to cool gradually. For this process of annealing large cast-iron vessels are employed, four feet high, in form of a truncated cone with the base uppermost. The wire is put into the vessels, which are then covered and luted tight. The vessel is surrounded by a brick wall at some distance from its sides, and burning charcoal is put between the vessel and the wall. These cast-iron vessels are made at the

allow the mines to be worked. metallorum omnium fertilitate nullis cedit terris Italia. Sed interdictum id vetere consulto patrum, Italiæ parci jubentium." Hist. Nat. lib. iii. 24.

* Ferber's Letters.

furnaces in the Maremma, and they are almost the only articles of cast-iron I observed in Tuscany.

The water coming from the hills near Pistoja is also employed in working a paper manufactory. A small water-wheel, three or four feet in diameter, puts in motion wooden hammers to reduce the moistened rags into pulp, a mode which is still used either solely or partially in Bohemia and some other parts of Europe, although it has been abandoned many years ago in Britain, and has given place to the engine in which the moistened rags are converted into pulp by passing between two sharp edges of steel, the one of which is fixed on a revolving cylinder.

Florence to Pisa.

The road from Florence to Pisa and Leghorn passes, after leaving Florence, through a cultivated country on the left of the Arno, and then over sandy hills, on which trees of the Pinus pinea are disseminated. The large cones of this pine are in form like a pine apple, and contain kernels inclosed in a hard shell; these kernels are agreeable to the taste, and are much eaten in Tuscany. The Pinus pinaster is also indigenous in Tuscany.

At Montelupo there is a palace and preserve belonging to the Grand Duke. The preserve for hares, partridges, and other game, consists of fifty or sixty acres of wood-land inclosed by a wall. There are wild boars in the country, near the sea-coast.

When there is a sufficient quantity of water to

cover the gravel banks and shallows in the Arno, the traveller may come by water from Florence to Pisa. The boats, loaded with merchandize, descend at a good rate.

Pisa.

Pisa is built like Florence. Through the middle of the city flows the Arno, embanked with stone quays and a broad street on each side. The river is larger than at Florence, and has several bridges over it.

Some of the public buildings also are constructed in the manner of those in the capital of Tuscany. The church of Saint John, or Baptisterium, resembles in form the octagonal church of St John the Baptist at Florence in its form and situation, near the portal of the cathedral.* It is less spacious,

* Of the ancient churches of a round or octagonal form, some of which were constructed for baptism, are,—the church of Santa Constanza at Rome, built in the time of Constantine; the church of Santa Maria Maggiore, near Nocera, according to the view in Cameron's Ancient Baths, is quite like Santa Constanza in form and size, San Stefano rotonda at Rome, said to be built by Saint Simplicius, resembles Santa Constantia in the general form, but is much larger; the Baptistery of San Giovanni, in fonte, near the Lateran Basilic at Rome. Differing from these in architecture, and resembling each other, are the churches of Saint John the Baptist at Florence, Pisa, and Pistoja, the octagonal round arched Baptistery at Cremona, of which there is a view in Grævii, Thes.

the interior is decorated with two large columns of reddish granite, about thirty feet high, said to be of Elba granite, and with a pulpit of marble sculptured in relief; on the Baptisterium is inscribed the year of its foundation, 1163.*

The Cathedral, a fine old building with round arches, is constructed of marble. It was built, as Vasari relates, in 1016, by Buschetto, a Greek architect.† The nave is separated from the aisles by fifty or sixty large columns of greyish coloured granite. Some of them are said to be from Elba and Sardinia; they are surmounted by Corinthian capitals. At the principal portal are three large bronze doors, with sculptures in relief, by Giovanni Bologna.

The *Campo Santo*, or burying-ground, is a rec-

Antiquitatum, Ital. Tom. III. There is a small ancient Baptistery at Ravenna. The round building called Theodoric's tomb, at Ravenna, seems to belong to another class. The round church of the Temple in London, of pointed-arched architecture, and the round church at Cambridge, differ from the Tuscan Baptisteries in the disposition of their parts. The round form of the ancient Roman fabrics, the Pantheon, and the small temple of Vesta at Rome, existed before they were used as churches.

* Vasari says it was built in 1060, which does not agree with the inscription on the building.—Vasari Vite de Pitt. proemio delle Vite, p. 74.

† Vasar. Vit. proem. p. 73

tangle surrounded by a spacious corridor or portico, the interior wall of which is perforated by round arched windows, ornamented with pointed-arched ribs. The length is 383 English feet, the breadth 127. This structure was built in the year 1200, by the architect Giovanni Pisano. Under the portico are many sarcophagi and inscribed tomb-stones of the ancient Roman times and of the middle ages. A large antique vase of white marble, in relief, with figures of bacchanals, approaches in size to the Medici vase. Amongst the tombs of modern times is a monument in memory of Algarotti, erected by Frederick II. King of Prussia.*

The fresco pictures on the wall of the portico are the works of Giotto, and of his pupils Benozzo Gozzoli, and Rondinelli. On another part of the wall is a picture by Andrew and Simon Orcagna, pupils of Giotto, † representing the infernal re-

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* In the inscription, Frederick styles Algarotti the rival of Ovid, and the disciple of Newton,

Algarotti Ovidii æmulo, Newtoni discipulo Fridericus

Algarotti was born at Venice, and died at Pisa in 1765. Frederick erected a monument over the tomb of another of his literary friends, the Marquis D'Argens et Aix. He even testified his remembrance of his favourite dogs by a monument, and in front of the Sans Souci palace at Potsdam, eleven tomb-stones are seen, each inscribed with the name of the dog that lies under it.

† Giotto died in 1336, Andrew Orcagna died about 1360, at the age of 70. See Vasari Vite de' Pittori.

gions and the last judgment, with figures lying on the ground and breathing out their souls, which have a human form. In a chapel, at one end of the gallery, are kept some old pictures of a smaller size. A virgin by Cimabue, and a picture by Giovanni Pisano, the master of Cimabue.

The inclined or hanging tower is constructed of large squared blocks of a compact marble, which is well adapted for building, and brought from the quarries of Mount Saint Julian near Pisa. The outside is formed by several stories of round arched open galleries. A stair three feet wide, formed in the thickness of the wall, leads to each of the galleries and to the top. The ground at Pisa is alluvial and insecure for foundations, which require to be laid on piles or upon arches, the piers of which are founded on piles, as Vasari * mentions. The foundations of this tower, it appears, were not sufficiently solid, so that they sunk on one side, and gave the building the inclined position it now has. The sinking has taken place without producing any considerable fissure in the walls. The deviation from the perpendicular is sixteen feet on the outside, and twelve feet within.

The fine and extensive view from the top of the tower comprehends the plain to the west, with the

* Vasari Vite de' Pitt.

Arno running through it, and beyond that the sea and the small rocky island of Meloria. To the north, mountains, the nearest of which are free from snow, but the more distant and higher are covered with snow at this season, on the 27th of January 1818.

The ancient city of Pisa was founded by a Greek colony, according to Pliny. Pisa, in the middle ages, became a powerful republic, possessed of an extensive trade, and the rival of Genoa. But in 1298 the fleet of the Pisans was destroyed by the Genoese, and the republic of Pisa never recovered from this calamity.

In the wars between the Florentines and Pisans in 1362, the Pisan troops were commanded by an English leader, John Aucud, (perhaps Hawkwood,) as Villani relates. The Florentines at last got possession of Pisa in 1406, by the treason of Gambacorta, the captain-general of the Pisans.

The remains of ancient Roman baths at Pisa are described by Montfaucon and others. The natural warm baths now in use are at a short distance from Pisa.

Pisa in 1406 came into the possession of the Florentines, who for some time encouraged the schools at Florence, and allowed the university of Pisa to languish, but in 1472 they re-established the university of Pisa, and Lorenzo de' Medici, then at the head of affairs in Florence, was one of the

chief promoters of this new foundation. The university suffered again from war and pestilence, and was revived by Cosmo I. Grand Duke of Tuscany, in 1543. In the seventeenth century the university was protected and encouraged by Cosmo II., Ferdinand II., and Cosmo III.

Amongst the professors at Pisa in the seventeenth century was the great Galileo, and the eminent names of Viviani, Toricelli,* Redi,† Malpighi,

* *Toricelli* was born at Faenza in 1608, and died in 1647, at the age of 39. He studied at Rome under Father Castelli, and lived in the house with Galileo at Arcetri, for a few months before the death of Galileo. He was then appointed mathematician to the Grand Duke. His most celebrated discovery is the barometer, and he was the first who shewed that the cause of the rise of the liquid in a pump, and of the height at which the mercury stands in the barometer, is the pressure of the column of external air reaching to the top of the atmosphere, and that this column of air is an exact counterpoise to the column of fluid in the tube, and, therefore, the column of mercury, a dense liquid, is shorter than the column of water, a rarer liquid, the heights being inversely as the densities. He also discovered the quadrature of the cycloid

† *Redi*, a native of Arezzo, died in 1694 He published Observations on Insects, on the Venom of the Viper, and other works.

Malpighi was born near Bologna in 1628, and died 1694, aged 66. He was professor of the theory of medicine at Pisa, and afterwards at Messina, and at Bologna. Three years before his death he was appointed physician to Inno-

Borelli, * Castelli. † Some foreign professors were employed at Pisa in the seventeenth century, amongst whom are mentioned Thomas Dempster, Finch the English anatomist, the Dutch professor Gronovius.

cent XII. A monument was erected over his tomb in the church of Saint Gregory at Bologna. He published his Anatomical and Microscopical Observations on the Lungs, the Spleen, the Gravid Uterus, &c. A treatise on Silk Worms; Observations on the Anatomy of Plants. Like to the Dutch anatomist Ruysch, he employed the microscope in all his researches.

* *Alfonzo Borelli* was born at Naples in 1608, and died in 1679. He was professor at Pisa for eleven years, and was patronized at Rome by Cristina, Queen of Sweden, and to gain favour with her he incurred the blame of writing in defence of judicial astrology. His most celebrated work is that entitled de Motu Animalium, in which he explains the motion of the limbs upon mathematical principles. See Mazzuchelli Scritt Ital, and Vitæ Ital. doctrin. excell by Angiolo Fabroni.

† *Castelli* was born at Brescia in 1595, and died in 1644. He was a Benedictine, and was professor of mathematics at Pisa, from 1615 to 1625, and afterwards in the Sapienza at Rome. He was the pupil and friend of Galileo, and the first accurate writer on the measure of the quantity of water in a running stream. His most celebrated works are La Misura delle acque correnti, and Le Dimostrazioni Geometriche della Misura delle acque correnti, published in the Racolta d'Autori del moto delle acque, Fir. 1723. He wrote concerning the Laguna of Venice, and was employed in embanking the lake of Perugia.

The university possesses an observatory and a botanic garden, which is kept in good order. I remarked in this garden a tree of the Salisburea or Gingko biloba, thirty feet high, and the Sacharum strictum, a tall arundinaceous plant, a native of the coast of Tuscany. *

The winter at Pisa is milder than at Florence, Florence being nearer the mountains. On this account the Grand Duke passes part of the winter at Pisa, and had not yet left it at this time in the end of January. Many English also reside in Pisa for the relief which a mild climate affords in affections of the lungs.

Orange and lemon trees, extended on walls, are now covered with ripe fruit; the climate, however,

* The botanic garden of Pisa was formed in 1544, under the inspection of the botanist Ghini, nine years after the formation of the botanic garden at Padua. *Andrea Cesalpino* was superintendent of the garden and professor in the university of Pisa for several years. After leaving Pisa he was physician to Clement VIII., and professor of medicine in the university of the Sapienza at Rome. He published, at Florence, in 1583, his work on Plants, in sixteen books, and was one of the first who formed a methodical arrangement of plants, and this arrangement was founded on the form of the fruit. He was also known as a commentator on the dialectics and metaphysics of Aristotle. He was a native of Arezzo, and lived to the age of 84, from 1519 to 1603.

A history of this botanic garden is contained in the Aggrandementi, &c. of Dr Targione Tozetti.

is cold enough to require that they should be sometimes covered with boards or mats.

Near Pisa the Grand Duke has a park where dromedaries are kept; they breed, and are employed as beasts of burden.

From Pisa to Leghorn the country is little cultivated. Montfaucon speaks of this district as covered with evergreen oaks when he saw it in 1701; it is now cleared of trees and intersected by large ditches full of water. A navigable canal serves for conveying goods between Leghorn and Pisa.

Leghorn.

Leghorn, in the fifteenth century, was a small and inconsiderable place, and, in 1421, it was ceded to the Grand Duke of Tuscany by Genoa in exchange for Sarzana. It is now a place of great importance to Tuscany, by the revenue arising from its trade, and it displays the activity of a flourishing commercial city, being one of the principal places of trade in the Mediterranean. It contains from 50,000 to 60,000 inhabitants.

The exports from Leghorn, in 1818, were, according to the list published in alphabetical order, *almonds* of Sicily, anchovies, argol, or rock moss, white and red; *barilla* of Sicily, berries juniper, brimstone, or unrefined sulphur of Tuscany and of Sicily, brimstone in rolls; *camels' hair*, cheese Parmesan, cream of tartar; *essence* of lemon, essence of ber-

gamot; *fruits*, including currants of Zante, figs, raisins of Smyrna, raisins of Lipari; *gum* arabic, gum tragacanth, gall nuts of Aleppo, black gall nuts of Smyrna; *irios* root of Florence; *liquorice* paste of Calabria, liquorice paste of Sicily; *madder* roots of Cyprus, madder roots of Smyrna, manna, marble of Carrara is occasionally exported to Britain from Leghorn, and other mischie or marbles of mixed colours of Tuscany; *opium*, olive oil of Lucca, of Gallipoli, olive oil of the Morea and Levant; *rags*, Tuscan; *safflower*, scammony of Aleppo, senna leaves of Alexandria, shumac of Sicily; skins, lamb and kid skins; *valonea* the acorn of a species of oak used in dyeing.

The imports,—*alum*, English; *cassia* lignea, cinnamon, cloves, coccineal; cocoa of Caracca, of Martinique, and of Marignon; coffee, West Indian, Bourbon and Mocha; cotton; *dye-woods*, including logwood, fustic; *fish*, including, cod-fish called in Italy Baccala, pilchards, red herrings of Yarmouth, salmon, stockfish; flax of Riga, and of Petersburgh; *hides*, Buenos Ayres, Brazil, Russia leather, and Roswals; *indigo*, Guatimala, Caracca, Bengal; iron, Russia, Swedish; *lead*; English sole leather; *nankeens*, nutmegs; *pepper*, Jamaica; pimento; *rice*, Carolina; rum, Jamaica and Leeward Island; *shell lac*, refined sugar, crushed, brown, and other kinds; tin-plates, tin in bars; *wheat* from Odessa, much of which is re-exported to England.

The manufacture of red coral beads is carried on extensively at Leghorn, and chiefly by Jews. The coral is fished near Sardinia. An extensive oil warehouse is one of the objects of curiosity visited by travellers. In the new baths that are constructing, which are to be supplied with sea water, each bathing vessel (bagnuola) is a trough formed out of one piece of marble, like the ancient Roman bathing vessels.

Near the harbour is a statue of Ferdinand I. Grand Duke of Tuscany, with four figures attached to the pedestal, the work of Giovanni Bologna.

A great trading town requires the free exercise of different forms of worship, and this liberty the Catholic governments find it their interest to accord. There is at Leghorn a chapel in which the church of England service is performed by the chaplain of the English factory, a Greek church, and a large synagogue.

The *Campo Inglese*, or English burying-ground, contains many monuments in memory of consuls and merchants who resided in Leghorn, and of English carried off at Pisa by pulmonary diseases.

The mole runs a considerable way out to sea; it is founded on a rock of stratified shelly limestone.

Florence to Rome.

I left Florence for Rome by the way of Perugia. The road passes along the Arno in the valley cal

led *Val d'Arno Superior,* in which the bones of the elephant, rhinoceros, and hippopotamus, are found.

It is now well known, that bones of these large quadrupeds are found in a fossil state in most of the countries of Europe; and the deposition of all these bones seems to have taken place at one period and in similar circumstances, whatever these circumstances may have been. Many naturalists suppose, that the heat of the temperate climates was once greater than it now is, and that the elephants and other animals lived in the places where their bones are found. Cuvier has shewn, that the bones of the various quadrupeds in the gypsum rock of Montmartre differ in several respects from the bones of all the species of animals that are now known to naturalists. The bones calcareously incrusted in the crevices of the rock of Gibraltar are more recent, and resemble the quadrupeds that now exist. Naturalists, within the last fifty years, have collected and published a great many observations with respect to fossil bones. A century ago some authors maintained, that the elephants' bones of Val d'Arno Superior were the remains of the elephants of Hannibal; but Livy relates that of the fourteen with which Hannibal began his journey across the Alps, only one remained when he had got to the Val d'Arno. It was in the marshes of this valley that

Hannibal lost one of his eyes by inflammation from exposure to cold and wet.

Amongst the mountains to the right of the Arno, and twenty miles from Florence, is the monastery of Valombrosa, which was the chief monastery of the order of monks called from the place Valombrosani.

Before Arezzo we cross the river Chiana, anciently named Clanis, which runs into the Arno; another part of the waters of the same valley of the Chiana goes into the Tiber.

In the time of Tiberius, an inundation of the Tiber having destroyed many buildings in Rome, it was proposed to turn away some of the streams that feed the Tiber. Amongst others, the waters of the valley of Chiana were to be turned into the Arno. The Florentines petitioned against this, and the project was not put in execution.*

Cassini and Viviani were employed, the former by the Pope, the latter by the Grand Duke of Tuscany, to regulate the distribution of the waters of this valley.

Agriculture of the Val di Chiana.

The Val di Chiana is forty miles broad, and se-

* "Seu preces coloniarum seu difficultas operum, sive superstitio, valuit ut in sententiam Pisonis concederetur qui nil mutandum censuerat." Tacit. Annal. I. 79.

ven to twelve broad, laid out in cultivated fields, divided into rectangular inclosures and squares, with ditches round every ten or twelve acres, and maples and elms, supporting vines, on the banks of the ditches.

It was converted into arable ground from the state of a marsh, by Cosmo I. in 1560, soon after he got possession of the territory of Siena, in which territory half of the Val di Chiana is included. The Chiana, in its whole length, was confined between embankments; and then the streams that run into it were confined in a similar way.

The Val di Chiana is interspersed with considerable farm-houses, like gentlemen's seats, with extensive offices. Many of these are the property of the Grand Duke, to whom a great part of the valley belongs, and were built by the Grand Duke Leopold, who also constructed roads, bridges, embankments, and drains in the Val di Chiana, and in the Maremma of Siena, which has thereby become less unhealthy; and for these beneficial works, and for the good regulations he made, his memory is honoured in Tuscany.

Part of the Val di Chiana belonged formerly to the military order of San Stefano, which was sup-

* The Grand Duke Peter Leopold succeeded his brother Joseph II on the imperial throne in 1790

pressed by the French; and their territory is now the property of the Grand Duke. This order was in some measure re-established by the Grand Duke in 1818.

In different parts of Britain we see as heavy crops as can stand on the ground; but they have in Tuscany a greater variety of produce, and can follow a more speedy rotation of productive crops, advantages which are owing to the warmth and fine weather of the climate. Tuscany is 120 English miles in length, on a meridian line from north to south, and 100 miles in breadth from east to west; but a great part of the surface is mountainous, and not susceptible of cultivation.

The farmers in the Val di Chiana, and in other parts of Tuscany, are steel-bow tenants, coloni partiarii, the whole produce of the ground being divided into two equal parts, of which the landlord gets one, and the farmer the other. The landlord is at the expence of manure, the repair of walls and other fences, reeds and stakes for vines, agricultural implements, and live stock of oxen, &c. land tax, and of keeping a steward, or *fattore*, who collects and sells the landlord's share of the produce;—of buildings for keeping the grain and produce, and of houses, granaries, and stables for the farmer and stock. The farmer, on his part, cultivates the ground, and performs all the requisite labour; he also bears half the expence of seed and some other articles.

In this mode of farming land, as in other cases where the rents are paid in grain, the value of the rent keeps pace with the price of grain. The landlord is put to the expence of keeping a steward to sell the produce, which expence he does not incur in case of a fixed rent. Writers on political economy are of opinion, that this mode of letting ground occurs chiefly in countries where the farmers are not possessed of capital sufficient to purchase the stock necessary for the farm, and maintain that it tends more to the improvement of agriculture, when the farmers are possessed of capital, and pay a stated rent.

In Scotland it used to be estimated, that the rent paid to the landlord generally amounts to one-third of the total produce of the farm. Of the other two-thirds, one is employed in defraying the expence of stock and cultivation, and the other is the profit of the farmer. If it be supposed, that in Tuscany the landlord's expence on the farm is 16 per cent., or between a sixth and a seventh of his half share of the produce, then his profit, or clear rent, will be in this proportion of one-third of the produce.

The following is an account of the landlord's profit, or rent, from a piece of ground, not remarkably fertile, near Siena, which was estimated to contain about an acre, and situated too far from the town to be benefited by its vicinity. But the account appears to be imperfect, as no mention is made of the expence of stock, &c.

	Scud	lir	sol	den
Wheat on one half of the ground, .	3	3	0	0
Beans on one half, ...	2	6	0	0
Wine, 250 quarts, ...	10	0	0	0
Olive oil, ...	2	6	0	0
Cherries, peaches, apples, &c. . .	0	4	0	0
Value of the landlord's half of the gross produce of one acre, ...	19	5	0	0

	Scud	lir.	sol	den
DEDUCT, reeds and stakes for vines, . . .	1	0	10	0
Repair of walls, &c. . .	0	2	6	8
Manure, . . .	1	3	0	0
Land-tax, . .	0	4	0	0
	3	2	6	8

	Scud	lir	sol	den
The expence to be deducted, . .	3	2	6	8
The landlord's profit, or rent, from one acre, equal to L 4, 1s 8d. Sterling.	16	2	3	4

Land near Siena sells at twenty years' purchase of the nett annual profit, or free rent.

The mode of dividing the produce of the soil between landlord and farmer was in use in Italy in the time of the ancient Romans. The farmers were called Coloni partiarii, * and are mentioned by Cato, and other ancient writers on agriculture.

The system of the ancients, however, differed in respect to the slaves, whether saleable separately or

* Pandect. l. 25, Locati.

attached to the land, glebæ adscripti, who were employed in its cultivation. The ancient Romans had also lands let at fixed rent, as had the Italians of the middle age, who employed to denote this rent the word fitto from the Latin fixus, census fixus, written in the middle ages census fictus ; and from this the modern Italian word affitare, to let. *

Medietarius, in the middle ages, was used in the same sense as partiarius, and from medietarius is formed the French word metayer, which originally signified a steelbow tenant, but is now applied to farmers of every kind in whatever way their rent is allotted, and metayrie is a farm generally.

The oxen used in the plough in Tuscany are very tractable, but slow. In the Val di Chiana, one pair, wrought by one man, ploughs an acre a day. This is done in eight hours, and the man works four hours more in other labours of the farm. The ground when prepared for seed is as fine as garden mould.

The oxen in Tuscany are beautiful, large, of a grey colour, with fine deep chests, little bone, and, when fat for the butcher, at four years old, weigh seventy-five stone English, and sell for a price equal to L. 21 Sterling.

At a great fair for the sale of these cattle at Cortona, an astonishing number were seen, beautiful,

* Muratori, Ant. Ital. Dissert. Undecima

and in good condition. They have abundance of green food all the year.

Beef and mutton are sold in the market at Siena at fourpence Sterling for a quantity equal to an avoirdupois pound. Pork, *majale*, is good, and fed entirely in the woods on acorns and some chesnuts. Wild boar, *cignale*, is plenty and good in the market at Siena, and is sold at fivepence Sterling for an avoirdupois pound.

Wheat is sown much thinner than in Britain, on broad drills, and the seed is covered in with hand hoes. They sow wheat in the end of October and beginning of November, and reap in the beginning of July. The wheat is well filled, clear, and hard. The farms are so small that they cut down the corn with the labourers usually employed, and have only occasion to hire one or two additional.

The country people, the *contadini*, cut down the crop usually in six days, and during that time they work very hard under the bright and elevated sun in July, from four in the morning till eight or nine in the evening, with only two hours of rest in the day. Most of the country people are small farmers, few of them are labourers only. The wages in the country ninepence, in Siena tenpence a-day.

After reaping, the corn is immediately thrashed out and laid up in granaries, which form part of the farm-houses.

Near Siena they sow wheat every second year.

The usual return of wheat is twelve to fourteen after one; when wheat is taken two years successively, the second year's crop is somewhat less productive than the first.

The usual course of husbandry, in the Val di Chiana, is two years wheat, with a little manure each year. Then, after the second year's wheat is reaped, the land is plowed and turnips are sown; the turnips are off the ground by April. Then the land is dug, manured, and planted with Indian corn, beans, hemp; or, if the land is not manured, it is sown with kidney beans, lupines, a kind of clover, vetches mixed with oats, lupinelli; the three last are for the cattle; the lupines, after they have grown for some time, are generally plowed in as manure.

The crop of turnips is great, and the turnips are of a large size. It never freezes strong enough to injure them. The profit from Indian corn and hemp is greater than from wheat, but they both require more manure, and must be dug. The produce on wine is considerable, but the wine is of an inferior quality in most parts of Tuscany. Vines are planted on espaliers thirty or forty yards from each other, and corn is cultivated on the ground between them.

The Monte Pulciano, the most esteemed wine in Tuscany, is like a weak claret, with little flavour, and does not bear the voyage to England.

The profit on silk is also considerable. Of an

estate in the Val di Chiana of L. 2500 Sterling a year, L. 600 of the rent was from the white mulberry trees called gelsi, and the rearing of silk-worms.

In many parts of Italy the proprietors of the white mulberry trees, which are planted as hedge-rows in the cultivated fields, do not grow silk, but send the leaves to market to supply those who have silk-worms.

All the fallow crops are well hoed. The wheat is sown in broad drills, and they often hoe between the drills. The wheat when grown is generally so strong as to leave no visible marks of the drills, and is higher than a man's height.

Although the ground is lower than the water in the rivers, yet the Val di Chiana is said not to be unhealthy. The countrymen never go out in the morning without eating bread, and drinking some wine. They look stout and healthy. The Val d'Arno di Sopra is considered to be equal in fertility to the Val di Chiana.

In the Val di Chiana, fields that are too low are raised and fertilized by the process called colmata, which is done in the following manner. The field is surrounded by an embankment to confine the water. The dike of the rivulet is broken down, so as to admit the muddy water of the high floods. The Chiana itself is too powerful a body of water to be used for this purpose; it is only the streams that flow into the Chiana that are used. This water is

allowed to settle and deposit its mud on the field. The water is then let off into the river at the lower end of the field, by a discharging course called scolo, and in French canal d'ecoulment. The water course which conducts the water from a river, either to a field for irrigation, or to a mill, is called gora. In this manner a field will be raised five and a half, and sometimes seven and a half feet in ten years. If the dike is broken down to the bottom, the field will be raised the same height in seven years, but then in this case gravel is also carried in along with the mud. In a field of twenty-five acres, which had been six years under the process of colmata, in which the dike was broken down to within three feet of the bottom, the process was seen to be so far advanced that only another year was requisite for its completion. The floods in this instance had been much charged with soil. The water which comes off cultivated land completes the process sooner then that which comes off hill and wood-lands. Almost the whole of the Val di Chiana has been raised by the process of colmata.

A proprietor, whose field is not adjacent to a stream, may conduct the stream through the intervening lands of another proprietor, on paying the damage he occasions. The process of colmata is expensive, because the ground is unproductive during the seven or eight years that the process lasts;

but this is soon repaid with great profit by the fertility of the newly deposited soil.

By the gravel which the rivers carry and deposit, their bed is much raised above the level of the adjoining fields; so that, in order to carry off the rain-water from the fields, drains are formed, which pass in arched conduits under the embanked rivers, and go into larger drains, which pass to the lowest part of the plain near Arezzo, and there enter the Chiana.

The soil in the Val di Chiana is generally the same to the depth of six feet from the surface, and under that is gravel or sand. After the completion of the process of colmata, the expence of which is always repaid with profit, the ground is cultivated for five years on the proprietor's own account; and the produce during these five years repays the expence of the process of colmata with profit. The two first years it is sown with Indian corn, (gran turco,) and sometimes hemp, the soil being then too strong for wheat. The next three it is sown with wheat, without any manure. The produce of wheat in this highly fertile state of the soil is twenty from one, whilst, in the usual state of the ground, the return of wheat is from twelve to fourteen after one. After this the field is let out in the ordinary way to the farmers, the contadini.*

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* The above remarks on the agriculture of the Val di

An operation similar to the Colmata has been practised near Gainsborough.

Arezzo was the birth place of several persons of celebrity, of whom are the following:

Guido d'Arezzo, who improved the theory and practice of church-music in the eleventh century, was a monk in one of the monasteries of Arezzo about the year 1020. His treatise on music, called Micrologus, has not been printed, but exists in manuscript in some libraries. *

Leonardo Bruni Aretino was born in 1369, and died in 1444. He was apostolic secretary to Innocent VII., and afterwards chancellor of the republic of Florence. He published in Latin the History of Florence from its Origin to 1404; De Origine Urbis Mantuæ; The Lives of Petrarch and Dante. A monument is erected to his memory in Santa Croce at Florence.

Chiana and of Tuscany are collected from the notes of a gentleman well acquainted with British agriculture, who lately passed a year in that part of Italy

The following works treat of the agriculture of Italy;—Sismondi, Tableau de l'Agriculture Toscane, Genev 1801,—Lettres d'Italie à M Pictet, en 1812 et 1813, par de Chateauvieux, Paris, 1816,—La Coltivazione is an esteemed poem on the subject, written in the sixteenth century, by Alamanni, a Florentine, in the service of Francis I. of France.

* Tiraboschi stor. dell. l. It. Tom. III. p. 395.

Georgio Vasari, born in 1512, painter and architect, and author of the Lives of the Painters. He was pupil of Buonaroti, and of Andrea del Sarto. Many of his pictures are to be seen in Florence; they are generally much crowded with figures. The building, called the Ufizj, which contains the gallery, is his architecture. In his Lives of the Painters, he is too partial to his countrymen the Tuscans, and is deficient in accuracy, not citing authors in support of his assertions in doubtful points of the history of the arts.

Pietro Aretino, a writer noted for the venality and impudence of his satirical productions.

After Arezzo and Cortona the road passes along the east side of the lake of Perugia, anciently called Lacus Trasimenus. Between the edge of the lake and the precipitous banks there is only room for the road.

In this place, and in the year 217 before Christ, the battle of the Trasimene lake took place, one of the few signal defeats the Romans met with whilst they were growing in power. Hannibal was encamped on the high ground which is traversed by the road from the lake to Perugia. He fell upon the Roman army whilst it was coming up in the narrow pass between the lake and the hills. The Romans, not informed of the position of Hannibal's army, did not expect an attack. They fought, but in the greatest confusion, each man for himself, without

any attention to military orders. After a desperate contest for three hours, the Consul Flaminius being killed, the Romans gave up hopes and fled. Some tried to save themselves by swimming, but the breadth of the lake was too great, and they were either drowned or compelled to return to the shore, where they were cut to pieces by the Carthaginian cavalry. Fifteen thousand Romans were slain on the field, ten thousand fled dispersed. The number of killed in the Carthaginian army was fifteen hundred. *

The lake is about eight English miles broad. The inhabitants of its banks are sallow complexioned, and subject to fevers.

The plantations of old olive trees, with the trunk decayed internally, but the branches of the top growing, have the appearance of pollard willows. The yellow flower of the Helleborus hiemalis is seen in the fields, it being now the 30th January. On the precipitous bank that overhangs the road, and descends from the town of Passignano to the lake, there are several plants of the Agave Americana, which does not bear the climate of Milan, although it grows a little farther north, in the sheltered situation of the Boromean islands.

The strata on the banks of the lake are of the flat

* See the descriptions of this battle in Livy and Polybius.

secondary kind. Some of them appear to be calcareous. There are strata of pit-coal, as I was informed, near the lake of Monte Pulciano.

Perugia is a considerable town, situated amongst the hills. The collegio del cambio, a room formerly used as the place of meeting of the money-changers, has its walls painted by Pietro Perugino, the master of Raphael. There are pictures by Pietro and other esteemed masters in several of the churches. In the cathedral is the taking down from the cross by Barocci, a picture that is now returned to its former place, after having been at the Louvre.

The large edifice of Monte Morosini contains the apartments appropriated to the university, which was founded in the year 1400; and also the academy of painting, or Scuola delle belle arti, which has a collection of pictures.

The public library contains some early printed editions. Baccius Ballionius brought German printers to Perugia, and the first work that appeared there is a law book, entitled *De Relationibus*, printed by Wydenast in 1470. The princeps edition of the Codex of Justinian was printed at Perugia, by Clayn of Ulm, in 1476.[*] The librarian also

* The art of printing was introduced into Italy soon after its invention in Germany, and before it was practised in France. The first book printed in Italy was in 1465, and there is no mention of any work printed in Paris before 1470.

shewed us a Greek manuscript of Stephanus de Urbibus, a geographical work, which has been published by the Benedictine antiquary Montfaucon;

The following is a list of the first books printed in different places in Italy.

In or before 1465, *Donatus pro Puerulis*, a grammar for school-boys, named from the ancient grammarian Donatus, the first book printed in Italy, and of which scarcely any copies exist.

In 1465, *Lactantii Firmiani Divinarum Institutionum, Lib. VII.*, is the second book printed in Italy. Both were printed at the monastery of German Monks at SUBIACO, on the Teverone twenty miles above Tivoli, and forty miles from Rome. Sweynheim and Pannartz were the printers.

In 1467, *M. Tul. Ciceronis Epistolarum ad Familiares, Lib. XVI.*, in domo Petri de Maximis. The first book printed in ROME. It was printed in one of the mansions of the Massimi family.

VENICE is the next city in which printing was carried on. The first book printed at Venice was in 1469, *Ciceronis Epist. ad Famil.* In that city the number of printers rapidly increased, and the art was soon brought to great perfection there by the elder Aldus Manutius, who lived 68 years, from 1447 to 1515, and was succeeded by his son Paolo Manuzzio, celebrated for his Ciceronian Latin, and his editions of Cicero. Paulo began to print in 1533. Aldus, the son of Paulus, was a man of letters, but not equal in eminence to his father and grandfather.

The first book printed in MILAN was in 1469, *Miracoli della Gloriosa Vergine Maria.*

The first book printed at Perugia, as above mentioned, was in 1470, the treatise *De Relationibus*.

and the beautiful edition of Saint Augustin, printed at Venice in 1470, and another early edition of the same work printed at Rome.

The public clock at Perugia has four dial plates, one of which shews the Italian hour, the hand making a revolution in six hours;—the second shews the hore ultramontane, or the hours reckoned from the sun's passing the meridian, in the way common in other parts of Europe;—the third shews the phases of the moon;—and the fourth is marked on the circumference with the letters T, G, +, S, O, L, P, M; it shews the direction of the wind, the hand being moved by a weathercock. The letters are the initials of the eight principal rumbs. T, signifies *Tramontana*, the north wind; G, *Greco*, the Aquilo of the ancient Romans, the north-east; +, *Levante*, the east; S, *Sirocco*, the Eurus of the ancient Romans, the south-east; O, *Ostro*, the south; L, *Libecchio*, also named *Garbino*, the Africus of the ancient Romans, the south-west; P, *Ponente*, the west; M, *Maestro*, the north-west; it is called Maestro on account of its strength. In the Italian compass, the names

In 1471, the first book was printed at NAPLES, *Bartholi de Saxo-Ferrato Lectura in II. Cod. Justin. partem.*

In almost every city of Italy printing-houses were established before the end of the fifteenth century. See Tiraboschi, Storia della Letteratura Italiana, Tom. VI.

of the intermediate rumbs, which are each two points from those already mentioned, are Greco-Tramontana, N.N.E. ; Greco-Levante, E.N.E. ; Sirocco-Levante, E.S.E..; Ostro-Sirocco, S.S.E. ; *Ostro-Libecchio*, or *Ostro-Garbino*, S.S.W. ; *Ponente-Maestro*, W.N.W. ; *Maestro-Tramontana*, N.N.W. The intermediate rumbs, one point distant from the foregoing, are named *tra Tramontana e Greco-Tramontana*, and so forth in the same way.

Just after Perugia the road crosses the Tiber.

Foligno, situated in the fine valley of Spoleto, has manufactories of wax and paper, and some inland trade. A newspaper is published here, which, however, is only a copy of the uninteresting and meagre newspaper of Rome. Besides the newspaper of Rome, and that of Foligno, there is no other published in the pope's territory, on this side west of the Apennines. *

On the way to Spoleto, near a place called *le Vene*, is a small ancient temple, situated on the Clitumnus. It has a pediment, supported by four columns with spiral flutings, and a Christian in-

* One newspaper is published at each of the following places: Venice, Milan, Genoa, Bologna, Rome, Naples; less extensive papers at Foligno, Modena, and in some other places in Italy. A newspaper in Italian is printed at Lugano, in the Italian bailiwicks of Switzerland, and circulates in different parts of Italy.

scription on the front. This edifice is now used as a chapel.

The Clitumnus takes its course to join the Tiber through fertile plains, which were famous in ancient times for feeding cattle. The victimæ maximæ, the white bullocks reserved for the sacrifices at the Roman triumphs, were fed in these pastures. *

Spoleto may contain about 6000 inhabitants. Hannibal, after defeating the Roman army at the Trasimene lake, marched to Spoleto, and having laid waste the country, made an attempt to get possession of the town, but was repulsed with loss. An arched gate-way, through which the street passes in ascending the hill, is called the Porta d' Annibale, from having resisted the attacks of Hannibal. There is another ancient arch, without architectural ornament, called the Arch of Drusus.

The mosaic on the front of the church was executed in 1207, according to the inscription.

The aqueduct of Spoleto connects the hill on which the town is situated with the adjacent hills, conveying water to the town over a narrow and deep valley.

* Hinc albi Clitumni greges, et maxima taurus
Victima; sæpe tuo perfusi flumine sacro
Romanos ad templa Deum duxere triumphos. VIRG.

Clitumnus is mentioned also in Juvenal, Sat. xii. Propertius, Lucan, Silius Italicus, and Claudian.

It serves also as a bridge, having a path for passengers, and consists of ten pointed arches, and nine piers. The middle piers are of a great height, by reason of the great depth of the valley. This pointed-arched fabric, which has no ornamental mouldings, was built about the year 500, in the reign of Theodoric, King of the Goths, and of Italy. It does not appear, however, that the pointed-arched style of architecture was introduced into Italy by the Goths; this style seems to have arisen out of the round-arched style, of which the commencements are seen in the palace of Dioclesian at Spalatro, and an example twenty or thirty years after, in the reign of Constantine, is the round church of Santa Constanza, near Rome. The round-arched style succeeded the ancient Greek and Roman manner with straight architraves, and was adopted, probably, from the difficulty of procuring large stones for architraves, and from the insecurity of these architraves, which most commonly break by the superincumbent weight, unless they are relieved by arches, an accident visible in many ancient buildings.

The ancient Greeks seldom employed arches in the ornamental parts of the fabric, and the ancient Roman architecture was borrowed from the Greek, and, in this respect, the Greek resembles the Egyptian style. The Egyptians employed the largest stones that have ever been wrought, by which means,

they were enabled to construct their great fabrics with architraves, and without arches. The architraved manner of building practised by the Egyptians, the ancient Greeks, and Romans, came to be laid aside in Italy in the fourth century, and round arches were used, springing from the columns. This round-arched, and sometimes the pointed-arched style, prevailed in Italy, and at Constantinople, during the midddle ages. Santa Sophia, built by Justinian, is in the round-arched manner. Both these styles are commonly called Gothic in Italy, an appellation which is to be understood only as equivalent to barbarous, or ungraceful, and not as signifying a style introduced by the Goths, for Maffei, Muratori, and Tiraboschi, have shewn that neither the Goths nor the Lombards introduced any particular style, but employed the architects they found in Italy. There are many buildings of pointed-arched architecture on the banks of the Ganges, as before mentioned;* whether any connection existed between the architects of these, and of the pointed-arched cathedrals in Europe, is not known.

Spoleto was on the road between Theodoric's royal residence Ravenna, and Rome, which then had only the second rank amongst the cities of his kingdom, and in his reign of thirty-three years, the

Page 99.

country round Spoleto was improved by the draining of the marshy ground in the valleys.

In the church of the monastery of Saint Andrew, a quarter of a mile from the town, there are some handsome fluted columns of marmo pavonazzato, of the Corinthian order, the remains of an ancient Roman temple. These columns are in their original position, the church having been built round them.

A new bridge is now making at the place where the Foligno road enters Spoleto. In clearing away the gravel to form the foundations, two arches of an ancient Roman bridge were discovered, called the Ponte Sanguinaria, on account of the Christian martyrs that are said to have been thrown from it.

From Spoleto, in the twelfth century, originated the Ursini family, the head of a powerful faction, and the rivals and antagonists of the faction of the Colonna family in Rome. The feuds between these two families kept the city of Rome in a state of internal war for 250 years, including the seventy years, during which the popes, from their inability to control these factions, quitted Rome, and fixed their seat at Avignon. The Colonna were Ghibelines, and took the part of the German emperors; The Ursini were Guelphs, and embraced the cause of the church, but the real object of both parties was to obtain dominion and pre-eminence in Rome.

There have been two popes of the Ursini family, Celestin III. and Nicholas III.

After Spoleto, the sides of the hills close by the road are covered with box, intermixed with Clematis viorna, Spanish broom, Helleborus viridis in flower. There are some oak trees of a good size.

The strata are a fine grained greyish or drab-coloured limestone. Some of the strata contain nodules of opaque flint, and, in this respect, and also from their texture, they may be considered as indurated chalk.

Between Spoleto and Strettura, on the way to Terni, we ascend the Monte Somma, the highest part of this road between Perugia and Rome, and covered now, on the 1st February, with one or two inches of snow. According to Sir George Shuckburgh, the height of the summit of this Monte Somma above the sea is 3738 English feet.

There is much copsewood of evergreen oak, Quercus ilex, called *lecce*, in this part of Italy. The acorns of another species of oak are used in this part of the country as food for horses, and are sometimes eaten by the poor. Another kind of acorn, with the cups called Valonia, is imported into Britain in considerable quantity from the eastern parts of the Mediterranean, for the purpose of tanning. On old walls here, and also on the walls of Rome and Florence, grows the Cotyledon umbilicus, a plant which is found in similar situations in

Ireland, and on the west coast of Scotland, but not in the eastern parts of Britain. A certain degree of humidity, therefore, or some other circumstance requisite for the growth of this plant, exists in this part of Italy, and in the west of Britain, and is wanting in the eastern parts of Britain. There is also seen the Cercis siliquastrum, called the Judas tree, and Erica Mediterranea six feet high. Truffles grow in this district.

The name of the town of Terni is derived from the ancient name Interamna, signifying a place situated between rivers.

From Terni we went four miles off the highroad to visit the cascade, at which we arrive after walking up the river Nèra, in a narrow valley or glen covered with copse of evergreen oak. The cascade is formed by the waters of the Velino, which join the Nera at the bottom of the fall. The body of water is considerable. The height is stated to be 368 palms, that is, 266 English feet. The Velino consists of the water issuing from the lake of Velino, and in order to prevent the inundation of the valleys, was turned by Marcus Curius into a new channel conducting it to the brink of the precipice, over which its waters form the cascade. The formation of this channel is mentioned by Cicero. *

* "Reatini me ad sua τέμπη duxerunt, ut agerem causam contra Interamnates apud consulem et decem legatos,

The river Nera, anciently called Nar, runs in a rocky channel composed of limestone, and the water of the cascade deposits much calcareous tufa, which form large masses of rock, as at Tivoli.

Proceeding on the road towards Rome, we pass along the beautiful and fertile valley of Terni, and arrive at Narni, which is situated on a stratified limestone rock. In a deep and vast fissure of this rock,* the river Nera runs and washes the foot of the rock on which the town is built. The rock, in some places, is a grey indurated chalk, with blotches of a reddish brown. There are caverns in the rock which are used as habitations. At Narni are the remains of an ancient Roman bridge.

Some miles after Narni, on a solitary part of the road, is a post of infantry to protect travellers against the attacks of banditti.

Before crossing the Tiber there are extensive banks of agglutinated gravel.

Between Narni and Civita Castellana, the road crosses the Tiber by a bridge of three arches of brick. The arches are modern. There was a bridge in this same situation built in the time of Augustus.

At Nepi and Civita Castellana the rocks are volcanic tufa.

* "Lacus Velinus a M. Curio emissus interciso monte in Nar defluit." Ciceron. Epist. ad Attic. iv. 14.

At twenty-five or thirty miles from Rome, there are well grown oak trees by the road for several miles.

For sixteen miles before Rome, the country in sight of the road is bare of trees, with only here and there a few bushes of alder, sloe, and crab apple. The surface is undulated with small eminences and dry. Ruined farm-houses are seen, and no corn fields, but the ridges on pasture fields shew that they have been once cultivated.

The neglect of agriculture in the neighbourhood of Rome is attributed partly to the great extent of the landed estates. The territory belongs to a few great families, whose ancestors were the nephews of some of the popes, * and whose lands are kept together by majorats, substitutions, and entails.

The ground, varied with hill and valley, appears dry on a general view, but the low ground between the hills is so situated, that it becomes marshy unless constant attention is paid to draining; and the marshy ground thus formed renders the neighbourhood unhealthy, the inhabitants being affected with intermittent fevers, as in other marshy countries, particularly where the heat of the weather is consi-

* The disadvantages which are sometimes ascribed to landed estates, were felt likewise in ancient times in Italy, according to Pliny. "Verumque confitentibus latifundia perdidere Italiam." Plin. Hist. Nat. XVIII. 7

derable. If the low grounds were more carefully cultivated and drained, the country would be less unhealthy. Draining has been found to produce this salutary effect in several places within the walls of Rome. *

The want of demand for manure, in consequence of the neglect of agriculture, occasions a great accumulation of filth in Rome. Filth prevails in the streets, squares, and courts of palaces; and, in particular streets there is an *immondezzaio*, a part of the street where the inhabitants are allowed to throw the dust and filth from the houses which accumulates for some time, and then is thrown into the river.

Near the road, three miles from Rome, is a large sarcophagus, upon a base of masonry, of which only the internal rough stones remain. It is the tomb of Vibius Marianus, procurator and præses of the province of Sardinia, &c. and of his wife, erected by their daughter, Vibia Mariana Maxima, as the inscription bears. † This sepulchre adds to the gloomy effect of the desolate fields that surround it. It was vulgarly and erroneously called the Tomb of Nero.

Near this, by the side of the ancient Via Cassia, was discovered, in 1667, the sepulchre of the Na-

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* See Lancisi de cœli Romani qualitatibus.

† See a figure and the inscription in Bartoli, Sepolchri Antichi, pl. 44.

sonii, containing chambers adorned with paintings in fresco, which are drawn and published by Bellori. Winkelmann mentions some pieces of these fresco paintings, preserved at the Villa Albani.

The road again passes the Tiber two miles before Rome, by the Ponte Molle, anciently Pons Milvius, over which Maxentius was precipitated in the flight, after the defeat of his troops by Constantine.

This bridge consists of four large arches equal to each other, and a small arch at each end. The two great arches on the left-hand side are of the broad thin ancient Roman brick, called in Rome tavoloni. The other arches are of stone. All the arches have lost their semi-circular shape, and the intrados has assumed an irregular form. The width of the river, measured on the bridge, is 138 paces, that is, about 380 feet.

The tower at the north end of the bridge was built in the middle ages for defending this entrance to Rome, and bears an armorial shield with the name of Pope Callistus, and the year 1458. The pope now reigning, Pius VII., perforated the tower to give passage to the road.

We enter Rome by the Porta del Popolo, the gate by which all who come from the north of Italy pass.

CHAPTER VI.

ROME.—*Sect. I.* CHURCHES.—*Sect. II.* ANCIENT BUILDINGS, *and Public Collections of Works of Art*—*Sect. III* PALACES *and* VILLAS.—*Sect. IV.* UNIVERSITY, LIBRARIES, *and other Objects.*

Sect. I. *Saint Peter's. Sistine Chapel.—Monte Testaceo. English Burying Ground. Pyramid of Cestius. Basilic Church of Saint Paul. Ancient Columns.—Saint John Lateran. Porphyry Sarcophagus. Scala Santa—Santa Maria Maggiore. Column.—San Pietro in Vincoli. Michael Angelo's Moses.—Church of the Minerva. Statue by Michael Angelo.—Church of the Santi Apostoli. Tomb by Canova.—Santa Maria del Popolo. Statue by Raphael.—Santa Maria della Pace. Raphael's Sybils.—Saint Agnes Algardi.—Sant Andrea della Valle. Domenichino.—Churches of the Jesuits.—Saint Agnes without the Porta Pia. Santa Constanza.—Santa Prassede.—Santa Maria in Cosmedin.—Temple of Vesta.—Temple of Fortuna Virilis.—Santa Maria della Navicella.—San Stefano Rotonda—San Giovanni e Paolo—San Lorenzo. Ambones—Church of Saint Andrew.—Saint Martin.—San Carlo—Torre delle Milizie.—San Pietro in Montorio. Bramante's Temple.—Catacombs.*

Saint Peter's Basilic.

THE basilic church of Saint Peter on the Vatican, the largest and most splendid church in the world,

holds the first place among the modern fabrics of Rome. The piazza in front of the eastern and principal portal is surrounded by a colonade which forms a curve on each side. The colonade is composed of four rows of columns, and the columns are so placed in radii of a circle, that on each side there is a central point, from whence the three columns of the more distant rows are concealed and covered by the columns of the nearest and interior row of the colonade. It has been proposed to extend the open place from the colonade, as far as the river and the Castle of Saint Angelo, by taking down the houses that at present cover the ground. This would add greatly to the magnificence of the approach to Saint Peter's.

In the centre of this curvilinear colonade is erected an Egyptian obelisk of granite, without hieroglyphics. This obelisk was the only one at Rome that remained erect during the middle ages; it was near Saint Peter's, and was removed to its present situation by order of Sixtus V., by the architect Domenico Fontana, who was born in 1543, in the territory of Como. Fontana published an account of the operation, with engravings of the machines employed in elevating this great mass of granite, which is eighty-three English feet in length, seven feet, four inches square in the middle, and weighs nearly 300 ton. Fontana also erected the obelisk at the Lateran, and that at Santa Maria

Maggiore, but they are broken, and the several pieces were put up separately. He likewise erected the obelisk at the Piazza del Popolo.

A meridian line is drawn to the north of this obelisk of the Vatican, with the signs of the zodiac, marked so that when the sun is in the meridian, the shadow of the top of the obelisk falls upon the line at the sign in which the sun is.

On each side of the obelisk is a magnificent fountain constantly throwing up a large quantity of water which falls down in spray.

From the foot of the obelisk the upper part only of the cupola is seen, the rest being hid by the front of the church. But, when viewed from a distance, the whole of the cupola is seen, and forms a magnificent object. The outside of the cupola and front of Saint Peter's are illuminated on certain festivals. This was the case this year (1818) at Easter. It is first illuminated with small lights, and these are afterwards changed for more brilliant ones. In this state, the illuminated outline of the building was seen to much advantage from the walk near the Villa Medici.

The colonades terminate in the vestibule which forms the east front of the church, at each end of the vestibule is an equestrian statue of marble, by Bernini. These statues represent the two great protectors and benefactors of the papal throne; the one is Constantine, the first emperor who adopted and promoted Christianity in the Roman empire,

and who, as the popes pretend, made a donation of Rome to them; the other statue represents Charlemagne, to whom they owe their territory on the other side of the Apennines. Pepin le Bref, and his son Charlemagne, gave the exarchate of Ravenna to the popes; this was the origin of their temporal power. In the twelfth century the popes first got the command of Rome, when the authority of the German emperors ceased in that city, as Muratori observes; but in the fourteenth they were unable to maintain their authority against the powerful factions in Rome, and retired to Avignon, where they remained seventy years.

The interior of the vestibule is adorned with columns of granite and of marble, taken from ancient buildings.

The central door of the church is of bronze, with bas-reliefs. On each side of the central door are the doors commonly used for entrance from the vestibule into the church, and on one side is the porta santa, a door-way walled up, which is opened with ceremony by the pope at the Jubilee. There is a porta santa at the other three principal basilic churches of Rome, Saint Paul, the Lateran, and Santa Maria Maggiore. The year of Jubilee, or the Holy Year, was instituted by Boniface VIII. in 1300, with plenary indulgence to the faithful who should visit the churches of Saint Peter and Saint Paul at Rome during that year. It had the

effect, at that time, of bringing vast numbers of pilgrims to Rome, and rich offerings to the pope's treasury. The interval between the years of Jubilee was at first one hundred years, afterwards it was reduced to fifty, and the number of pilgrims being found profitable to the popes and to the inhabitants of Rome, the Jubilee was sometimes celebrated at the end of thirty-three, twenty-five; and even, at last, of ten years, during the simultaneous existence of the rival popes. *

Saint Peter's is built of Travertine stone. The stones obtained, about 1587, from the demolition of the Septizonium of Septimius Severus, which had become ruinous, were employed in the construction of Saint Peter's by Sixtus V. †

The nave, with its great lateral pilasters, are of

* See Chais, Lettres Historiques sur les Jubilees et les Indulgences, a la Haye, 1751.

† See Leti Vit. Sixt. V. The Septizonium of Septimius Severus, which Nardini does not admit to have been the tomb of that emperor, consisted of three stories or tiers of colonades, at the time of its demolition; it was situated at the foot of the Palatine hill, opposite to the church of Saint Gregory. A fortified tower was built upon it in the middle ages, as on many other ancient structures, and this fortress resisted the attacks of the Emperor Henry IV.; Muratori Anal. d'Ital. Tom. IX. A view of the Septizonium, as it was in the sixteenth century, is published in Donatus de urbe Roma, in Græv. Thes. Antiq. Rom. Tom. III. Fig. 31.

Travertine stone, painted to represent white marble with blue veins. The cylindrically-arched ceiling of the nave is covered with sunk pannels containing ornaments richly gilt. The side aisles, or side naves as they are termed in Italy, and by the French les bas cotès, are incrusted with marbles of different colours. The church receives a great deal of light from the windows, which are well disposed for that purpose, and is free from the obscurity that prevails in many large churches.

All the pictures in the church are composed of Mosaic, which resists the effects of humidity better than oil paintings do. Amongst these Mosaics there are copies from the two celebrated masterpieces, Raphael's Transfiguration, and Domenichino's Communion of St Jerom. The originals of both of which are now in the picture gallery of the Vatican Palace.

The chair at the west end of the nave, with the colossal statues of bronze that support it, is designed by Bernini. The effect of this huge fabric is rather heavy. It is an example of the degenerate ornamental style that prevailed in the seventeenth century.

Under the cupola is the high altar, over which is the grand canopy, the baldachino of bronze supported by four spiral-shafted columns, also of bronze. This canopy, cast out of the bronze beams taken from the soffit of the portico of the Pantheon, is well propor-

tioned to the size of the church, and on account of its being seen at the same time as the great pilasters of the church, it appears of a moderate size. Its height is said to be equal to that of the Farnese Palace, which consists of three tiers of very lofty windows.

On two evenings of Easter week, the inside of the church is illuminated by a cross suspended at the eastern verge of the cupola. This cross is about twenty-four feet high, covered with brass plates, on which are fixed about 120 lamps. There is no other light in the church, and the arms of the cross being rectilinear and without ornament, a simple and pleasing effect is produced. The idea may have been borrowed by Bernini from the lustre, in form of a four armed cross, in the church of Saint Mark at Venice.

In a chapel, near the entrance, is a group of the Virgin mourning over the dead body of Christ, by Michael Angelo. The subject is called la Pieta. It was the earliest of his celebrated statues. The next was the David in the piazza del Granduca at Florence.*

By the side of St Peter's chair is the sepulchral monument of Paul III. Farnese, with recumbent emblematical female figures, after the design of

Vasari, Vita di Michel Agnolo Bonarroti, Firenze, 1550

Michael Angelo, but not executed by him. Prudence is represented by a female of an age somewhat advanced. The other figure was considered too naked, and a drapery of bronze has been added.

In the south transept is the large marble sculpture, in high relief, by Algardi, representing Saint Leo, and the Apostles Peter and Paul, who appear in the air compelling Attila to retreat from Italy.* By Algardi also is the monument of Leo XI. de Medici. Of the four statues larger than life, at the great piers which support the cupola, that of St Andrew, by Fiamingo,† is the best.

The sepulchral monuments are in considerable number. Besides the two already mentioned, and several others, there is one of Pope Clement XIII. Rezzonico, who died in 1769, and was succeeded by Ganganelli, sculptured by Canova.—One in memory

* Near Verona and the southern extremity of the Lake *di Garda*, Attila, in 452, was induced to withdraw his troops from Italy by means of an embassy from Valentinian. Saint Leo, bishop of Rome, was one of the ambassadors, but he did not succeed, three years after, in prevailing on Genseric, king of the Vandals, to retire from before Rome, which Genseric took and pillaged. The Sermons and Epistles of Saint Leo exist in libraries.

† François du Quesnoy, called in Italy il'Fiamingo from his country, was born at Brussels, and died at Leghorn in 1644. executed bas reliefs of groups of children, which are ch esteemed.

of Christina, * queen of Sweden.—The monument of Clementina Sobieski, styled in the epitaph Queen of England, consort of the Pretender to the crown.—That of the Countess Matilda, whose ashes were brought from Mantua in 1630; she made a donation of her dominions to the popes, and Viterbo, which they still retain, was a part of this donation, as mentioned before. †

Under the pavement of the cupola is the subterraneous edifice called the *chiesa antica*, the old church. It is low, being only eight or nine feet to the top of the flat elliptic arches which compose the ceiling. It contains various altars with lamps burning before them the shrines in which are the bodies of Saint Peter and Saint Paul, and a number of large stone arks, sarcophagi, or quadrangular urns, containing the remains of different popes. A granite sarcophagus contains those of Pope Adrian, a native of England, who was pope from 1154 to 1159.

* Christina, after resigning the crown of Sweden, embraced the Catholic religion and lived at Rome in 1668. She formed an academy or meeting of learned men in her palace for the cultivation of poetry. This meeting gave origin of the Academy dell' Arcadia, which exists in Rome at this day, and which was instituted in 1690 for the purpose of correcting the bad taste in poetry which then prevailed. *Tiraboschi, stor del lett. It.*

† See page 176, and Fiorentini, Vita della Gran Contessa Matilde.

Near it are the urns holding the ashes of the Pretender to the crown of England, who died in 1766, aged 72; of the Cardinal of York; and of Christina, queen of Sweden.

Women are not permitted to enter this subterraneous church, for fear the darkness of the place should invite to sensual rather than spiritual love.

The length of Saint Peter's, within the walls, is 606 feet $9\frac{9}{10}$ inches, taking the Roman palm at $8\frac{7}{10}$ English inches.*

The sacristy, or vestry, is attached to the south side, and is more recent than the rest of the church, having been constructed in 1777, in the time of Pius VI. Braschi. It contains large presses of walnut-tree for the reception of the church-plate, which was diminished in quantity during the last invasion of the

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* On a line drawn along the middle of the pavement of Saint Peter's, from the west end to the east door, are marked the lengths of Saint Peter's itself, and of five other large churches; the length of each is set off from the west end of St Peter's, and is indicated by a brass star, and the name inserted in the pavement. These marks are as follows, beginning from the east:

Templum Vaticanum, *Saint Peter's, measured within walls,* [illegible] Roman palms, Londinense Paulianum, *Saint Paul's, London,* 710; Primarium Templum Mediolanense, *the Cathedral at Milan,* 606; Basilica Sancti Pauli via ostiensi, *Saint Paul's near Rome,* 572; Constantinopolitana Divæ Sophiæ Ecclesia, *Sancta Sophia at Constantinople,* 492.

French. The relics, of which there is a great collection, are shewn to the public from one of the high galleries under the cupola at Easter and other great festivals.

On the walls of the vestibule of the sacristy are incrusted some ancient Roman inscriptions, found in digging the foundations of the sacristy. Amongst them are the acts of the college of priests, called Fratres Arvales, in the year 218, in the reign of Elagabalus, containing a hymn, which is considered to be an example of the Latin language in its ancient unimproved state.*

The way up to the roof is by a broad cordonated spiral stair. The roof is terraced with brick, in planes gently inclined inwards so as to allow the water to run into pipes disposed for carrying it away. The roof, with the three principal cupolas and the other smaller ones, to a spectator that is upon it, presents the appearance of a piazza with different buildings. The three principal cupolas are covered with lead, and in some places with copper. In the vaulted part of the great cupola, the stair is between the exterior and the interior vault, of which the cupola is composed.

The view from the top of the cupola comprehends,

* This inscription is published under the title of Gli atti e Monumenti de' Fratelli Arvali, 1795.

like that from other eminences in Rome, the volcanic group of the Latian hills, with Frascati and Albano; the more distant Apennines with Tivoli; the ancient Soracte to the left. The sea is seen in clear weather. There is access into the ball, which is of copper, and steps on the outside of the ball for going upon the cross. The height of the cross above the base of the obelisk in the piazza is stated to be 471 English feet, and above the Tiber 502.

Saint Peter's had at different times received injury from lightning; to guard against such accidents it was furnished with thunder-rods some years ago, and all the metallic parts on the roof are connected together, and communicate with the ground by metallic conductors.

Saint Peter's was built in the space of about 100 years, from 1510 to 1610, during the pontificates of Julius II., Leo X., and Sixtus V., and other popes, and finished in the seventeenth century, in the time of Paul V. Borghese; some additions were made in 1650, under Innocent X. Pamfili.

That great genius Michael Angelo Bonaroti gave the design which has been chiefly followed, superintended the building for seventeen years, and till his death. Before his time the architects Bramante, Baldassar Peruzzi,* Raphael and Sangallo had succes-

* A design of a flattish cupola for Saint Peter, by Baldassar Peruzzi, is published in the Architettura de Sebastian Ser

sively the superintendence of the fabric, but nothing of theirs is to be seen, Michael Angelo having proceeded on a design different from that followed by his predecessors. At the death of Michael Angelo the erect walls of the cupola were built, and he left a model in wood, according to which the brick vault of the cupola and lantern were constructed after his death.

After the death of Michael Angelo, which happened in 1564, Vignola was employed as architect of Saint Peter's, he followed the design of Michael Angelo, and built the two small cupolas. The front was constructed after the design and under the inspection of Carlo Maderno.† The colonade is after a design of Bernini. Carlo Fontana estimates that, up to 1694, a sum equal to ten million sterling had been expended on Saint Peter's.

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lio. Venet. 1663. The Massimi Palace at Rome is a work of Peruzzi.

* Jacopo Barozzi da Vignola, born at Vignola, in the dutchy of Modena, in 1507, and died in 1573, at the age of 66. His book on architecture, entitled the Rule of the Five Orders of Architecture, has gone through many editions, in different languages. The canal from Bologna to Ferrara; the aqueduct of the Acqua Vergine at Rome, which is a restoration of the ancient Aqua Virgins; and was executed by order of Julius III.; the octagonal palace of Capraola, between Viterbo and Rome, built for Alexander Farnese, are some of his principal works. Tiraboschi, stor. dell. Lett. Ital.

† See Historia del Tempio del Vaticano, by Bonani, a Jesuit.

Civitas Leonina.

The suburb of the Vatican was formed by the Greek, Gothic, Lombard, and Saxon pilgrims, who came to Rome, to visit the shrine of Saint Peter. This suburb was surrounded by a wall, by Pope Leo IV. in 849, and called the Civitas Leonina; the name it is commonly known by is the Borgo San Pietro. A fortified wall was afterwards made round this suburb in 1548, under the direction of Jacopo Castriotta of Urbino, by order of Paul III.

A covered passage forms a communication between the Vatican Palace and the castle of Saint Angelo.

Sistine Chapel.

The Capella Sistina is in the Vatican Palace, adjacent to Saint Peter's. The ceiling is vaulted and adorned with paintings, in fresco, representing the Prophets and Sybils, by Michael Angelo. His celebrated fresco picture of the Last Judgment covers the end wall of the chapel. All these pictures are considerably injured by the smoke of the tapers used in the church ceremonies.

In this chapel are performed the admired services of Tenebræ, on the Wednesday, Thursday, and Friday of Easter week, in presence of the Pope and Cardinals. The whole of the service is sung by voices, without the accompaniment of any instrument.

The chaunting of the lessons from the Lamentations of Jeremiah, and of the Miserere, is plaintive and affecting. The great effect of this music is obtained by the perfect training of the band of singers continually practised in singing together. The emperor procured a copy of the music from the pope, and had it performed at Vienna, but without the effect that it produces in the Sistine.

The *Capella Paulina*, which is near the Sistine, both of them having their entrance from the hall called the Sala Regia, contains, The Conversion of Saint Paul, and the Crucifixion of Saint Peter, in fresco, by Michael Angelo, much injured by the smoke of tapers, which are lighted up in great numbers to receive the host, which the pope deposits in the altar of this chapel on Good Friday.

The *Scala Regia*, designed by Bernini, is a long stair of one flight, which leads from the vestibule of Saint Peter's up to these chapels.

The Road leading to Saint Paul's without the City.

To arrive at this church, we proceed by the way which passes between the river and the abrupt face of the *Aventine hill*, in which Virgil * describes the den of Cacus to have been. Farther on, and on the right hand, is the *Monte Testaceo*, a considerable eminence 174 feet in height, formed in ancient times

* Æneid. Lib. VIII.

by the broken pottery of Rome. The ancient Romans had a great variety of objects made of potter's clay, vessels for holding wine, tubes for conveying water, large sarcophagi, bas reliefs, bricks of various forms, tiles, and many others. The fragments of earthenware vessels, of which Monte Testaceo consists, are supposed to be the refuse collected from the potteries of Rome, that it might not be thrown into the river with injury to the depth of the channel.[1] Monte Testaceo is now a place to which the populace resort for amusement in fine weather; and at the foot of the hill are drinking-houses for the reception of the guests.

The *pyramid of Caius Cestius*, 119 feet in height, forms part of the wall of the city near the gate of Saint Paul. Cestius was the friend of Agrippa. The inscription bears, that he was one of the Septemviri Epulonum, a fraternity or sodalitas, that had the charge of the lectisternia, the feasts of the gods. This fraternity was composed of persons of high dignity, like the sodalitas of the Fratres Arvales, whose decoration, the crown of ears of wheat, is seen on the ancient busts of Lucius Verus and Antoninus Pius. The paintings on the walls and ceiling of the included chamber, which is small in proportion

Marliani, Topog. Rom.

to the solid mass of masonry of the pyramid, are drawn and published by Bartoli. *

Near the pyramid, and within the walls of the city, is the *English burying ground.* Amongst the monuments is one in memory of Sir James Macdonald, erected by J. B. Piranesi, the engraver and architect, in 1766. Another is placed over the remains of Jacob More, the landscape painter, who was a native of Edinburgh, and died in 1793. The ground is uninclosed, and the monuments are defaced by the mischievous, probably by reason of the dislike which the populace bear to foreigners and Protestants. The road from the gate of Saint Paul, for a couple of miles, till we arrive at the church, is between market gardens, in some of which the gardeners' huts are perched upon masses of masonry, the remains of old tombs, as if upon a piece of rock.

Saint Paul's.

The basilic church of Saint Paul is the second of the basilics in point of size. It was rebuilt by Leo III. about the year 800.

The mosaic on the front of the church is of the fourteenth century.

* Bartoli, Sepolchri Antichi, tav. 64 65, &c. A section of the pyramid and cylindrically vaulted chamber is drawn in his tav. 62 A dissertation on the pyramid of Cestius, by Falconieri, is published in Græv Thes. Ant. Rom. Tom. IV.

The bronze door, which has only some rudely engraved outlines of human figures, representing scripture histories, was cast at Constantinople in 1070.

The interior of the church of Saint Paul is magnificent, and exceeds all others in Rome, by the great number of large marble columns with which it is constructed. There are five naves parallel to each other, and separated by marble columns supporting semicircular arches. The middle nave is the largest, and has 40 magnificent marble columns, 37 feet in height; 24 of these columns are each of one piece of pavonazzo marble, and formerly decorated the tomb of Adrian, now called the castle of Sant Angelo.

The number of marble columns in the side naves is 80. At the crossing, and in the transept, there are ten large columns of granite, some of them of red Egyptian granite, like that of the obelisks, the others of grey granite. The whole number of columns in the church is stated to be 120, all taken from ancient buildings. Above the arches in the middle nave is a series of portraits of the popes painted on the wall, and also subjects from scripture, both much injured by time. There are some small pointed arched windows in the side of the church; but the prevailing architecture of the building is the round-arched style.

There is some mosaic in the church, said to be of

the year 400, in the time of Saint Leo, bishop of Rome. The carpentry of the roof is exposed to view in the ceiling, and is said to be of cedar.

The church of Saint Paul is one of the four principal basilic churches of Rome, and has a porta sánta, a walled door, opened by the pope at the jubilee. The building, called Basilica amongst the ancient Romans, according to the description given by Vitruvius, consisted of porticos formed of columns, in which the public met for transacting business, and containing apartments for courts of justice. The first churches may have been formed of these ancient basilicæ, and the naves, or internal porticos of which churches are formed, may have been derived from the ancient Roman basilicæ. The name also of basilica, in the early times of Christianity, was synonymous with church, and, in latter times, is applied to churches distinguished by certain privileges, as the seven basilic churches of Rome.

The original foundation of the church of Saint Paul's is ascribed to Constantine; but the building that now exists is not so ancient. The principal columns were taken, it is said, from the Moles Adriani, now the Castel Sant Angelo. That fabric had not been stripped of its ornaments before 537, in which year the Romans and the troops of Justinian used it as a place of defence, and threw the fragments of statues upon the Goths, who were the assailants; and this was 200 years after the death

of Constantine. Donati mentions, that the church was rebuilt by Gregory II., who died in 731, and afterwards by Leo III.,* who reigned from 795 to 816, and crowned Charlemagne at Rome.

Adjacent to the church is a cloister, the columns of which are twisted and ornamented with gilded mosaic, as is also the frieze.

The portico in front of the church was added by Benedict XIII., Orsini, about 1726. Near the church is a descent into catacombs, the old quarries used as burying places by the primitive Christians.

Some way farther out on this road is the ancient church Alle tre Fontane.

Saint John Lateran.

The four principal basilic churches in Rome are the churches of Saint Peter, Saint John Lateran, Santa Maria Maggiore, and Saint Paul. Of the churches of Saint Peter and of Saint Paul we have spoken already.

The church of Saint John Lateran is called the principal church in Christendom, Lateranensis ecclesia urbis et orbis mater et caput, and several general and provincial councils have been held in it. The principal front, of Travertine stone, was erected about the year 1735 by Clement XII. Corsini,

* Donatus e Societate Jesu, de Urbe Roma, Lib. IV. cap. 5.

under the direction of the architect Galilei, and has a loggia or open gallery on the second tier, for the pope to give his benediction from on solemn occasions. The Lateran has another less modern front and loggia by Domenico Fontana, in the time of Sixtus V. There are similar benediction galleries on the fronts of the other three principal basilic churches. The niches in the interior are adorned with columns of *verde antico* from the baths of Diocletian. This beautiful marble, verde antico, is said by Visconti to have been imported from Thessalonica, * others say from Lacedemonia. One of the columns of antique yellow marble which support the organ was taken from the arch of Constantine, and formerly belonged to Trajan's forum. In the highly decorated Corsini chapel is the tomb of Clement XII. Corsini, consisting of a large antique sarcophagus of red porphyry, which was found in the place before the Pantheon.

The two antique chairs of ancient red marble, one of which is now in the museum of the Vatican, and the other in the Louvre, were formerly used as pontifical chairs in the Lateran church. They are perforated, and, it is supposed, were used in the ancient baths.

The Patriarchium or palace, adjoining to the La-

* See Visconti's Catalogue of the Statues in the Louvre.

teran church, was once inhabited by the popes; the fabric that now exists was built by the architect Domenico Fontana, in the reign of Sixtus V. Sixtus V. also began the fabric of the Belvidere palace of the Vatican. The popes at different times had their residence at different churches in Rome; at Santa Sabina on the Aventine, at Santa Maria Maggiore, at Saint John Lateran, and, lastly, at Saint Peter's on the Vatican.* This palace of the Lateran is now used as an hospital for indigent girls, Conservatorio di Zitelle.

Near the Lateran church is a chapel which formed part of the old church destroyed by fire in 1308. This chapel contains the *scala santa*, the stair, according to tradition, of the house of Pontius Pilate brought from Jerusalem. The faithful ascend this stair on their knees; the steps are protected from being worn by a covering of boards. Adjoining to this is a tribuna with Mosaic, the remains of a hall of the ancient pontifical palace, originally constructed in the time of Leo III.

Near the Lateran is an ancient octagonal church called the Church of San Giovanni in Fonte, or the Baptisterium. The cupola within is supported by columns of porphyry, and the general form of

* Fabricii Descriptio Urbis Romæ, cap 21, in G Thes. Antiq. Rom. Tom. III.

the edifice is like that of the church of Santa Con-stanza and the church of San Stefano Rotonda.

The largest obelisk in Rome is erected on the piazza of the Lateran. It is one of the four which were placed by the architect Domenico Fontana by order of Sixtus V. The other three are the obelisk of Saint Peter's, which was the only one then erect and unbroken, and was at that time removed to its present situation; the obelisk of the Piazza del Popolo; and that of Santa Maria Maggiore, which was broken into three pieces. The mechanism employ-ed in removing the obelisks, and an account of the fabrics of Sixtus V., are published by the architect D. Fontana, with engravings.*

The obelisk of the Lateran lay buried twenty feet below the surface in the soil of the Circus Maximus, which, by the ruin of the drains, had become a marsh.† By order of Sixtus V., and under the di-rection of Domenico Fontana, it was removed a dis-tance of a mile and a half up hill, and erected in its present situation; 300 men were constantly at work in the removal. When found it was broken into three pieces; each piece was lifted up by ropes tied round it; furrows in form of a cross were cut on

* Della trasportatione dell' obelisco Vaticano et delle fa-briche d. N. S. Papa Sisto V. fatte dal Cavallier Domenico Fontana, architetto di sua santita. In Roma 1590

† Marliani Topog. Rom. 1544

the upper and under surfaces of the pieces; these furrows were in form of a dovetail, in coda di rondine; the ropes were passed in these furrows; when the pieces were placed erect one above the other, in the situation in which they were to remain, the ropes were withdrawn, and one cross groove being directly over the other, dovetailed pieces of granite, fitting exactly, were put into the dovetailed cavities, and run in with lead; in this way the three fragments were fixed together. *

A broken pedestal was found in the Circus near this obelisk, with an inscription, which shews that the obelisk was brought from Thebes to Rome by the Emperor Constantius. The obelisk of the Piazza del Popolo also was found in the Circus Maximus, and erected in its present situation by Sixtus V.

Santa Maria Maggiore.

The church of Santa Maria Maggiore, called the Basilica Liberiana, having been originally founded by Liberius, bishop of Rome, who began his reign in 352, is adorned internally with magnificent old Ionic columns of marble. It contains some Mosaic of the year 434. The Borghese chapel is highly ornamented, and contains the tomb of Paul V. Borghese. Of the two cupolas which are seen on the outside of the

* See Dom. Fontana, del. tr dell' obelisco

edifice, the one covers the chapel of Paul III. Farnese, the other the chapel of Sixtus V. Felice Peretti.

Before the principal front of this church is erected a very large fluted column of cipollino marble, which was the last column that remained of the Temple of Peace, the ruins of which now exist in the Forum Romanum, and was placed in its present situation by Paul V. The height of the shaft is 46 English feet, 4 inches. It is surmounted by a Corinthian capital, on the entablature of which is placed a statue of the Virgin. This column was erect at the Temple of Peace in the time of Poggio in 1430, and is mentioned in the account he gives of the appearance of Rome in his book de Varietate Fortunæ. In old drawings this column is represented in the interior of the temple, and placed against one of the piers which support the arches. On medals of Vespasian, who built the Temple of Peace, the temple is represented with six columns in front. *

On the place behind the tribuna of the church is erected an Egyptian obelisk without hieroglyphics, brought to Rome by Claudius, and formerly placed on the mausoleum of Augustus.

Michael Angelo's Moses, in San Pietro in Vincoli.

The Moses of Bonaroti is placed on the tomb of Julius II. in the church of San Pietro in Vin-

* See Nardini Roma Antica.

coli. It is larger than life, and seated; and remarkable for the noble commanding expression of the lawgiver, and for the correctness of execution. It is considered as Michael Angelo's chief masterpiece in sculpture. The tomb which this statue adorns has no inscription, nor even the name of Julius II. to whose memory it was erected. There are only some oak branches sculptured on a frieze, the emblem of the family della Rovere to which he belonged; the name Rovere signifying robur, oak.

Some time ago the statue was brought forward a little out of its rectangular niche in order to take a mould from it, and since the mould was taken the statue has been allowed to remain thus drawn forward, it being thought that the statue is seen to more advantage than when pushed back into the niche. A cast from the above-mentioned mould was lately exhibited in London.

Julius II. was violent and ambitious, and employed the arts to hand down his name to posterity. Raphael painted for him the rooms in the Vatican palace, and in these paintings the portrait of Julius is introduced several times.

The tomb was begun during the life, and by orders of Julius, and was to have been of great magnificence. According to Michael Angelo's original design it was to consist of an insulated quadrangular fabric of marble 18 braccie, or about 33 English feet, in length, and 12 braccie, or 22 feet in breadth,

and within this there was to be an elliptic chapel, with a recumbent statue of Julius. The portion that was executed, and which is seen at this day, is only one of the smaller sides of the quadrangular edifice. * Besides the statue of Moses, it is adorned with female figures representing la Vita Contemplativa, or meditation, and la Vita Attiva, or active life, and some others, not executed by Michael Angelo, but after his design.

The church of San Pietro in Vincoli, which contains this admirable statue, is so called from its possessing the chain with which Saint Peter was bound. The interior is handsome, the nave being separated from the aisles by twenty-two large antique fluted columns of marmo Greco, with Ionic capitals; an antique marble, so called at Rome, which has light blue veins, in parallel straight lines, running along the length of the columns, and a large grained crystalline fracture. The ceiling is a flattish arch.

Works of Art in other Churches.

In *Santa Maria sopra Minerva* is the upright statue of Christ holding the Cross, by *Michel Angelo*, and the monuments of Leo X. de' Medici and Clement VII. de' Medici, by Baccio Bandinelli.

In the church of the *Santi XII. Apostoli* is the mo-

* Vasari, Vita di Michel Agnolo Bonarroti

nument of Clement XIV. Ganganelli, by Canova; and in the vestibule a sculpture in relief, representing an emblematic figure of Friendship mourning over a medallion of the copperplate engraver Volpato, the work of Canova, and erected at his expence. In this church is the tomb of Besarion. *

In the church of *Santa Maria del Popolo* is a statue of Jonas, executed after the model and under the direction of Raphael. It is recorded by an inscription on an altar in this church, that Paschal II. drove away the evil spirits who were perched on the branches of a walnut tree by the way side, and insulted passengers. † According to the tales of the middle ages, these demons were the guardians of the ashes of Nero, who was buried in the sepulchre of the Domitia family, ‡ near the site of this church.

In the church of *Saint Augustine* is a picture of Isaiah by Raphael, painted in emulation of Bonaroti's prophets in the Capella Sistina.

In the church of *Santa Maria della Pace* are the

* See p. 46.

† The inscription given by Montfaucon, in his Diarium, is as follows " Altare a Paschali Papa II. divino afflatu, ritu solenni hoc loco erectum, quo dæmones proceros nucis arbori insidentes transeuntem hinc populum dire insultantes confestim expulit, Urbani VIII. Pont Max. Auctoritate excelsiorem in locum quem conspicis translatum fuit. An Dom. MDCXXVII." See also the History of the Church, by Alberici.

‡ Sueton. Nero.

paintings of the Sybils, by Raphael, but much injured by time.

In the vault under the church of *Santa Agnese*, in the Piazza Navona, is the celebrated sculpture, by Algardi, in high relief, representing Saint Agnes miraculously protected by her long flowing hair. The two belfries in the front of this church resemble those of Saint Paul's in London. The architecture of the church and cupola is by Borromini.

In the church of *Sant Andrea della Valle* are the beautiful fresco pictures, on the vault of the Apsis or Tribuna, by Domenichino.

The chapel of the Strozzi family, in this church, is after a design of Bonaroti, and contains two sarcophagi of black marble, of a form similar to those designed by him in the chapel of the church of San Lorenzo at Florence. There are bronze statues on the altar, and the whole chapel is of dark coloured materials.

In this church is a copy, in marble, of the statue in the Vatican library, representing Saint Hypolite, with the Paschal cycle in Greek engraved on the chair, and here a Latin translation is added. The original of this statue is of the time of Alexander Severus; and, according to Winkelmann, is the most ancient Christian figure in stone that exists. The head on the original is modern.*

* Winkelmann, Hist. de l'Art, Tom. III. p 252.

In the church of *San Carlo ai Catinari*, on the four angles of the cupola, are fresco paintings by Domenichino.

In *San Luigi dei Francesi* are Acts of Saint Cecilia, in fresco, by Domenichino

The cupola of the church of *San Silvestro* contains some paintings by Domenichino.

In the portico of the church of *Sant Onofrio* are some fresco pictures, representing the actions of Saint Jerome, by Domenichino. In this church is the tomb of Tasso.

* Torquato Tasso was born of a Bergamase family, in 1544. His father, Bernardo, was author of two poems, on subjects taken from romance, Amadigi, and Floridante. Torquato was patronized by Alfonso II., d'Este Duke of Ferrara, and lived at his court. After the publication of his poem Torquato fell into a state of melancholy, and was on that account confined at Ferrara, in the hospital of Saint Anne He was afterwards in Mantua under the protection of the Duke of Mantua, on whose death he went to Naples, still in a desponding state of mind, and suffering from the narrowness of his pecuniary circumstances. A short time before his death he came to Rome, Cardinal Cinzio Aldobrandini having the intention that Torquato should be crowned with the poetic laurel in the Capitol. But Tasso was taken ill, and had himself removed, on account of the salubrity of the situation, and from religious motives, to the convent of Saint Onofrio, then belonging to the order of Saint Jerome, where he died soon after in 1595, at the age of 51.

Soon after the appearance of his Gierusalemme Liberata, a great contest began amongst the literary critics of Italy

In the church of *San Gregorio*, on the Mons Cælius, are two celebrated fresco pictures : The Flagellation of Saint Andrew, by Domenichino, and the crucifixion of Saint Andrew, by Guido. These two great masters painted these pictures at the same time, each trying to excel, and to produce a work superior to that of his rival.

In the church of the *Santissima Concezione* is the celebrated picture of the Archangel Michael, by Guido, and Saint Francis, by Domenichino.

Santa Maria in Transtevere is a fine old church, with twenty two large Ionic columns of granite, and the pavement adorned with porphyry. On the ceiling is the Assumption, by Domenichino. There is a chapel, the architecture of which is by that master, and also the painting on the ceiling. In this church is some Mosaic of the year 1143.

on the question, whether the preference was due to that poem or to the Orlando Furioso.

The Gierusalemme Liberata is considered as the first epic poem in the Italian language; Orlando Furioso as the first poem of romance. Ariosto has a more fertile imagination; Tasso's expressions are more select and noble.

Metastasio is inclined to give the preference to Tasso, although the general opinion is rather in favour of Ariosto.

Tasso's pastoral drama l'Aminta is much esteemed. He published many other works, the morbid state of his mind not being of such a nature as to prevent his writing. See *Tiraboschi, stor. dell. lett. Ital*

Contiguous to the Jesuits' College, called Collegium Romanum, is the church of *Saint Ignatius*, the front of which is by Algardi, and the ceiling is painted with an architectural design and figures in perspective, by Pozzo, * a Jesuit, author of a treatise on Perspective.

Another magnificent church belonging to the Jesuits in Rome, is the church *del Gesu*, adjacent to the casa professa of their order. The interior of this church is highly decorated with marbles.

In another church of the Jesuits is a recumbent statue of Saint Stanislas.

Without the Porta Pia, the interior front of which is after the design of Michael Angelo, is the ancient church of *Sant Agnese*, adorned internally with antique columns of pavonazzato and porta santa marble,† two of which have a double fluting of a singular kind. The descent into this church is by a flight of forty-five steps. The walls of this staircase are covered with ancient Christian epitaphs.

Hard by is the round church of *Santa Constan-*

* Pozzo was a native of Trent, and died in 1709, at the age of 67.

† *Pavonazzato* is an antique marble, white, with purple viens. *Porta Santa* is so called from the door-posts of the Porta Santa of St Peter's being made of it; it is an antique [illegible]le, with spots and veins of a brownish red colour.

za. The church is seventy-six feet in diameter. The central part is separated from the rest by granite columns, in pairs, which support the arches and the cupola. The cupola is a hemispherical vault without an aperture at top to admit the light. Each pair of columns is placed in the direction of a radius. According to the drawing of Cameron,* the round church of Santa Maria Maggiore, near Nocera, very much resembles this, having pairs of columns placed diametrically. In the internal and external form also, Santa Constanza is like the church of San Stefano Rotonda, and the Baptisterium of the Lateran.

The ashes of Constantia the sister, and Constantia the daughter, of Constantine the Great, were deposited in this church, in a large sarcophagus of porphyry, sculptured with foliage in relief. The sarcophagus was removed by Pius VI. to the Vatican Museum, of which, with its companion, the sarcophagus of St Helena, it forms a conspicuous ornament. There is some ancient mosaic on the walls of this church, representing fauns employed in the labour of the vintage, like the sculptures on the porphyry sarcophagus of Saint Constantia.

The columns of this church appear to have been taken from some more ancient fabric. The com-

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* Cameron's Ancient Baths.

posite capitals do not fit the shafts, some of the capitals being of a larger diameter than the shaft, others of a smaller. * The arches, springing from the entablature, constitute that style, from which the round-arched architecture of the middle ages arose. The intrados of the arches does not coincide with the plane of the bands of the architrave of the entablature, from which the arches spring, but is farther out;—this is evidently improper. From the style of architecture, it is the opinion of Winkelmann † and others, that the church was built by Constantine, his daughter Constantia having been baptized there; that the fauns, grapes, and vine foliage are only the remains of the pagan ornaments which, at that time, continued to be employed in Christian churches; and that the edifice never was a temple of Bacchus, as Ciampini and others have maintained.

In the church of *Santa Prassede* is a column two feet high, called the column of the flagellation of Christ, brought from Jerusalem, in 1223, by Cardinal John Colonna. It consists of an uncommon kind of granite or syenite, whose surface presents large white angular spots with black angular spots of hornblend; it is called large spotted antique black granite by the marble cutters of Rome.

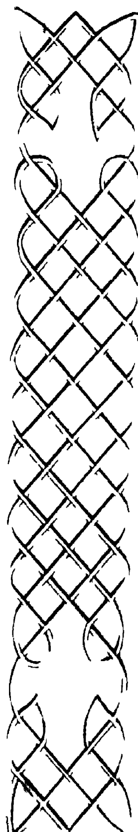
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* Piranesi Ant. di Rom. Tom II. tav. 21, 22, 23.

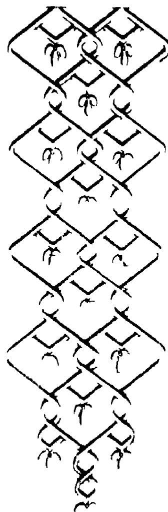
† Winkelmann, Hist. de l'Art, Liv. VI chap. 8

Sculptures in the style of the Arabesques of the Alhambra page 319

In the Church of
Santa Prassede at Rome



On Talcaceous Shist in
Argyle shire



W.A. del

Edinburgh Published by A. Constable & Co. 1820

The door post of the chapel of the column is sculptured with an interlaced design like those that are seen on tombs at Icolmkill, the island in Loch-awe, and other old churches in the west of Scotland; and no doubt all these sculptures are of the same period, and by artists of the same school. In the middle ages, the monastic establishments in these countries had intercourse with Italy; and Saint Columbanus, a native of Ireland, founded the monastery of Robbio in Italy, in 612.*

On the hemispherical vault of the Tribuna or Apsis, in old mosaic, is the Paschal lamb, and on each side six sheep representing the Apostles. The same subject is represented in mosaic in the tribuna of the church of Santi Cosmo e Damiano, formerly the Temple of Remus, in the Forum Romanum.

Near the Arch of Janus is the church of *Santa Maria in Cosmedin*. Cosmedin is a Greek word, signifying a part of the ornamental dress of the priests. The temple of Pudicitia Patricia was on this site in the year 261, and the ancient temple has been altered and transformed into the church. The ancient marble columns of the temple with Corinthian capitals are enveloped and hid by the front of the organ loft, and are to be seen behind it.

* Mabillon Annal. Bened.—Tiraboschi, st. d. l. T III 1 ,1

This edifice was called Schola Græca in the time of Adrian, and Saint Augustine is said to have taught rhetoric in it.

In the portico of the church is a large round slab of marble, five or six feet in diameter, sculptured with the representation of a human face in low relief, and perforated at the mouth, nose, and eyes. It is said to have been in a temple of Jupiter, and that those who made a solemn oath, placed their hand in the mouth of the figure. Others suppose that this stone was placed in a pavement, and served to let the water pass into the sewer beneath. From this figure, the church and the neighbouring place have the name of Bocca della Verita.

In this church, and several other old churches in Rome, are the two marble reading desks called ambones, that on one side of the church for the epistle, that on the other side more elevated for the gospel.

In the piazza della Bocca della verita, near the side of the river, is the small round temple, said to be of Vesta, with fluted Corinthian columns, now the chapel of *Saint Stephen*, called also Santa Maria del Sole, in form and size like the round temple at Tivoli. The temple of the Sun at Balbec, also a Roman work, is somewhat similar.

Under this temple is the stone arch by which the Cloaca Maxima issues into the Tiber. This arch

is best seen from the opposite side of the river, near the end of the Ponte Rotto. The arch is semicircular, and composed of three courses of large blocks of stone, which is said to be Piperino, one over the other. The vacuity of the Cloaca is thirteen feet in height, and thirteen feet in width. A short way from the issue, and near the Arch of Janus, a stream of water, employed in turning a paper-mill, flows into the Cloaca Maxima.

On the other side of the way is the church of *Santa Maria Egyptiaca*, anciently the temple of Fortuna Virilis. The columns are Ionic, and half engaged in the wall, which formed the side of the ancient temple; the front or pediment is gone; part of the building is of Piperino. * This church belongs to the Armenians.

Hard by is the house of Cola de Rienzi † in a singular style of architecture.

* Piranesi Ant. di Rom.

† Nicola di Lorenzo, commonly called Cola di Rienzi, in 1347 had the supreme power in Rome, with the title of tribune of Rome. But from his imprudent conduct, his dominion lasted only for a few months. For five hundred years, from the beginning of the tenth to the end of the fourteenth century, the city of Rome was in a state of lawless anarchy, and afflicted by the private wars of the powerful citizens. During the short time that Rienzi governed, he checked the power and punished the disorders of the Colonna and Ursini families and other barons, who possessed fortresses in the

The ancient church of *Santa Maria in Domnica*, called *della Navicella*, on the Cælian hill, near the Villa Mattei, is adorned with ancient columns within, and was restored, with a new front, under the direction of Raphael, by order of Leo X., who was cardinal of this church.

In the place before the church is the model of an ancient ship in marble, about fifteen feet in length. A cast of this ship, from which the place is called piazza della navicella, is to be seen in Greenwich Hospital.

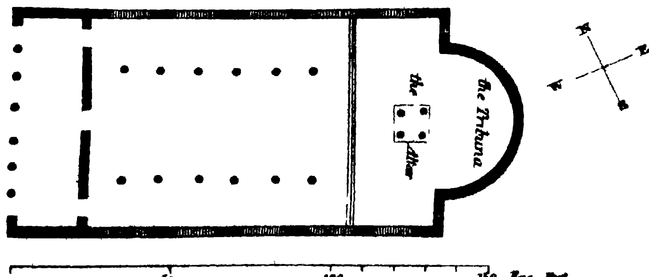
Not far from this is the ancient church of *San Stefano Rotonda*, which some suppose to have been a temple of Faunus; but from its round-arched style of architecture, the account, which ascribes its construction to Saint Simplicius, bishop of Rome, in the reign of Theodoric, is more probable. The figure of the church is round, and 140 feet in diameter. The central part is divided from the exterior parts, by a circle of ancient columns, with Ionic capitals. Many of these columns are of granite. Through the centre runs in a straight line a lofty arcade, supported by Corinthian columns, an anomalous part of the build-

city and adjacent country, and were the protectors of every kind of violence, when committed by their partisans. Rienzi enjoyed the friendship of Petrarch, who entertained hopes that Rienzi was to bring back the prosperous days of Rome.

SANTI GIOVANNI E PAOLO. P.323

SANTA CROCE IN 1690

Shewing the form of the Oldest Churches in Rome constructed with Ancient Columns after the Model of the ancient Basilicae P 329 see also Basilica in the Alphabetical table



ing which is perhaps necessary for its support. The number of columns in the church is 58, the spoils of more ancient buildings. The ancient buildings have furnished a vast quantity of columns of marble and of granite, which now form the chief ornament of many of the churches in Rome. Other ancient columns are sawed up by the marble-cutters for various uses. This circular church resembles in its general form the church of Saint Constantia and the Baptisterium of the Lateran, but is of a larger size.

A chair of white marble is here preserved, from which Saint Gregory the Great delivered his fourth homily.

The church of *Santi Giovanni e Paulo*, on the Cælian Mount, near Saint Gregory, has an open gallery of small arches, supported by columns, running on the outside of the round extremity of the church; this gallery is in the round-arched style of architecture, which commenced in the decline of the Roman empire, and occurs in old churches in England. Almost no pointed-arched architecture is seen in the churches of Rome. At Florence there is some.

In the basilic church of *San Lorenzo*, originally founded by Constantine, and situated without the gate of San Lorenzo, are two ancient sculptured sarcophagi, one of which serves as the tomb of a cardinal, who died in the thirteenth century.

In the Tribuna are twelve ancient fluted columns of pavonazzato marble, with Corinthian capitals. Some of the capitals are ornamented in a singular manner, with well sculptured human figures, intermixed with the foliage of the capital.

The two marble reading desks, called ambones, here ornamented with round slabs of red porphyry and green serpentine of the statuaries, and the twisted column, with gilded mosaic for supporting the paschal taper, are seen in this ancient church, and in others of the old churches of Rome. The taper, or cera pasquale, is a large wax-candle, painted with foliage and ornaments, which is lighted at Easter, and continues to be lighted on certain subsequent festivals.

Without the Porta del Popolo, near the Ponte Molle, is the small polygonal church of *Saint Andrew*, with a round cupola, designed by Vignola. *

The church of *Saint Martin* is adorned by a set of landscapes, painted on the walls of the side aisles, by Gaspar Dughet, commonly called Gaspar Poussin, containing some figures by Nicholas Poussin. The nave is separated from the ailes by twenty-four antique columns of marble. The subterraneous church underneath was built by Saint Silvester, who held a council there about the year 324, at which Constantine was present.

* See page 297.

The church and convent of San Carlo alle quatro fontane, called, on account of its small size, *San Carlino*, were constructed by Borromini in 1640, on a space equal to the ground plan of one of the four piers that support the cupola of Saint Peter's. This space is equal to a square, whose side is about fifty-six English feet.

The church of *Santa Maria della Vittoria* contains the statue of Saint Theresa with the Angel, by Bernini, considered to be one of his best works.

In the church of *Santa Maria di Loreto*, near Trajan's column, is a statue of Saint Susanna, by the celebrated sculptor Francis du Quesnoy, called il Fiamingo. *

In the court of the monastery of Saint Catherine, on the descent which leads from Monte Cavallo to Trajan's column, is a brick tower, built as a private fortress by Gregory IX., in 1230, called *Torre delle Milizie.* It is one of these towers, constructed in the middle ages as private fortresses, of which several still exist in Rome, Florence, Bologna, Pavia, and other cities in Italy. Another similar brick tower at Rome is called Torre de' Conti, and was built by the architect Marchione, by orders of Innocent III., of the same family of Conti di Segin, about the year 1200. †

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* Concerning this sculptor, see page 292.

† Donatus de Urbe Roma, Lib. IV. cap. 8 Quæ post Leonem IV ædificata sunt

The interior of the church of *Santa Maria in Valicella* is architecturally decorated by Pietro da Cortona. There is a statue of Saint Philip Neri by Algardi, and some pictures by Rubens and others. The church belongs to the Oratorians of Saint Philip Neri, who perform some musical oratorios during Lent, in a chapel contiguous to the church. Before the oratorio a short discourse is delivered, with lively expression, by one of the boys who are educated in the monastery. To these representations women are not admitted, in order to prevent indecent behaviour, which might take place by reason of the darkness of the chapel. The Philippini or Oratorians are secular, and not subject to monastic vows. The front of the monastery is by Borromini, in the seventeenth century, and, like his other fabrics, crowded with ill-selected ornament.

The Janiculine hill is called Monte Aureo, from the yellow colour of the gravel and sand, of which its surface is composed; and from this circumstance is named the church of *San Pietro in Montorio*, on the Janiculine hill. In this church is a chapel painted after the designs of Bonaroti, by Sebastian del Piombo.* Raphael's Transfiguration, formerly

* Sebastian del Piombo, so called from the office of Frate del Piombo, which he held at Rome, and which was so lucrative as to make him idle and negligent of his art, as Vasari

in this church, is now in the picture gallery of the Vatican. In the middle of the cloister is a small round temple, with a cupola, and circular portico of sixteen Doric columns of grey granite, built by the celebrated architect Bramante, by order of Ferdinand and Isabella of Spain, who founded the monastery; the temple is said to be on the place where Saint Peter suffered martyrdom. This temple is small, being only about twelve feet in diameter within. The principal floor is a chapel, and underneath is a subterraneous chapel. It is, in its general form, an imitation of the round temple at Tivoli, and that by the side of the Tyber, now the chapel of Saint Stephan, both which are something larger than Bramante's temple. The temple of the Sun at Balbec, a Roman work, is also nearly of this kind.

The church and convent are now occupied by monks of a mendicant order, Franciscans. These monks make long journies into foreign countries; the one that accompanied us to shew the monastery had lately been at Constantinople; he travelled ge-

relates, was a Venetian, as before mentioned, in p. 63: His martyrdom of Saint Agatha, in the Pitti palace, in which picture the executioners are represented tearing off the breasts of the saint, who had refused to gratify the lust of Quintianus, governor of Sicily, in the year 251, is mentioned in p. 191.

nerally on foot, and sometimes, he said, on a sorry nag a cavalluccio, when he could procure one. *

From the esplanade before the church is a fine view of Rome. The white villas at Frascati are seen on the Latian hills, and Tivoli is perceived less distinctly on the more distant mountains, which form part of the Apennines. This view from the Janiculine is mentioned by Martial, in his description of the villa of Julius Martialis, situated on that hill. †

* The friars are accustomed to a hard life, and are put to the use of various expedients to maintain themselves, and make converts. They can turn their hands to any thing. In a voyage published by Ramusio, there is an account of one of them who was in the country near the river Don, and employed himself in catching wild fowl with a net, by which industry he gained so much money as to purchase a Circassian boy, to whom he gave the name of Partridge, (Pernice.) and made him a friar

" Ritrovandosi à quel tempo nella Tana, (the country near the Tanais, or Don,) un Frate Theimo dell' ordine di San Francesco, con un rizaglio faccendo di due cerchi uno grande, e ficcando un palo alquanto storto in terra fuor delle mura, ne (di gallinaccie, a large kind of tetrao, or grouse) pigliava dieci e venti al tratto, e vendendole, trovo tanti danari: che di quelli compro un garzon Circasso, alquale pose nome Pernice, e fecelo frate." Viag. di Barbaro, in 1434, in Ramusio, Tom. II. fol. 93, E.

† Juli jugera pauca Martialis,
Hortis hesperidum beatiora,
Longo Janiculi Jugo recumbunt.

In the church of the *Trinita de' Pellegrini* is a picture of the Trinity, by Guido.

In the church of *Santa Maria della Traspontina*, near Saint Peter's, is the tomb of Nicola Zabaglia, who died in 1750, eminent for his mechanical inventions.*

The church of *San Luca e Santa Martina*, belonging to the Academy of Painters of Saint Luke, near the Arch of Severus, is designed by Pietro da Cortona, and is ornamented with an octagonal cupola.

Catacombs of the early Christians.

In allusion to the seven churches of Asia Minor, Ephesus, Laodicea, Sardis, Thyatira, Pergamus, Smyrna, Philadelphia, typified by the seven candlesticks, the like number of churches in Rome were endowed with particular indulgences, granted to the faithful who visit them, and afterwards the

Puris leniter admoventur astris,
Celsæ culmina delicata villæ,
Hinc septem dominos videre montes
Et totam licet æstimare Romam
Albanos quoque, Tusculosque colles
Et quodcunque jacet sub urbe frigus.

Mart. Epigr. IV. 64.

* Zabaglia was a carpenter, and, in the reign of Benedict XIV. Lambertini, he erected the large obelisk of the Campus Martius at Monte Citorio. A description of the machines invented by Zabaglia was published by Bollati in 1743.

popes extended these indulgences to seven altars, situated in certain churches in different parts of Italy; so that there is often seen written over an altar, for the information of the devout who desire to gain the indulgences, unum e septem altaribus. The seven churches of Glendallough, in the county of Wicklow, derive their number from the same source.*

These seven basilic churches of Rome are Saint Peter's, Saint John Lateran, Santa Maria Maggiore, Saint Paul, Santa Croce in Gierusalem, San Sebastian, and San Lorenzo; three of them are without the walls.

San Lorenzo, one of these seven churches, is situated about two miles without the gate of San Lorenzo. From this church there is an entrance to one of the ancient arenaria, or pozzolana quarries. This arenarium, called the cemetery of Saint Ciriaca, is a low and ill formed gallery of a mine, driven through the volcanic tufa. It is a small depth under the surface, perhaps fifteen feet. On the side of the gallery are rude ill formed shelves, on which the bodies of the primitive Christians were deposited. This galllery is said to extend to the church of Santa Agnese, two miles distant.

The volcanic tufa, in which the catacombs are formed, is considered to be an argillaceous stratum

* See Smith's Survey of the Seven Churches of Asia.

which has been burnt by volcanic fire, and is of a reddish brown colour. It is the subsoil in the eastern part of Rome, and the adjacent country. In some places it is in a pulverulent state, and then it is called Pozzolana, and is used in Rome for making mortar, which acquires great hardness. Terra Pozzolana is so called from Pozzuoli, near Naples, where the best was got, as Vitruvius mentions. Formerly considerable quantities of pozzolana used to be imported into Britain for mixing with lime to form the mortar of bridge piers, canal-lock basins, harbours, light-houses, and other fabrics, situated under water. But within the last twenty years it has been found that clay ironstone, calcined in the fire and reduced to powder, has the same effect, and when made into a paste with water soon becomes hard, and is not washed away by the water in which the fabric is constructed; this has been named Roman cement, and in the neighbourhood of London is made of the nodules of clay ironstone that occur in the London clay; on the banks of the Frith of Forth it is made of a stratified clay ironstone, also near Whitby. It is now generally used for the purposes for which pozzolana was formerly imported, and likewise for smooth plastering the fronts of houses in London.

There is an entrance into another extensive range of catacombs in the basilic church of Saint Sebastian,

near the circus of Caracalla; there are other catacombs near Saint Paul's.

The bones found in the above-mentioned catacombs have been for centuries of years sold as relics of martyrs. Only these tombs, however, that contain a small glass vessel of red liquor called a Lacrymatory, and have the letters B. M. inscribed, that is, Beatus Martyr, are considered by antiquaries as the tombs of martyrs. The glass phials were used for holding balsams and other liquors, of which libations were made on the ashes of the dead. *

A paste composed of wax and the pulverized bones from the catacombs, after receiving the papal benediction, is stamped into medallions, bearing the figure of a lamb, and distributed to the faithful. This kind of medallion is called Agnus Dei, from the figure imprinted on it. The ceremony of bestowing the benediction on this paste was performed by the pope in Easter week of this year, 1818.

ROME.—*Sect. II.*—ANCIENT WORKS OF ART.—*Coliseum.* —*Pantheon.*—*Column of Trajan.*—*Column of Antoninus.* —*Arch.*—*Monument of the Claudian Aqueduct.*—*Obelisks.* —*Circus of Caracalla.*—*Tomb of Metella.*—*Baths of Ti-*

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* See Muratori Antiq. Ital. Dissert. LVIII.

tus.—Moles Hadriani.—Mausoleum of Augustus.—Forum Romanum.—Forum of Nerva.—Palace of the Cæsars.—Theatre of Marcellus.—Quirinal Hill, Colossal Statues.—Amphitheatrum Castrense.—Temple of Minerva Medica.—Piazza Navona, Pasquino.—Museum of the Vatican; Garden of the Belvedere of the Vatican.—Museum of the Capitol.

Coliseum.

THE most remarkable * of all that remains of ancient buildings in Rome, and the largest Roman building of stone that exists, is the Coliseum.

The name Coliseum, otherwise written Colosseum, is derived by some from a colossal statue of Nero, placed in the vicinity. Maffei derives the name from the magnitude of the building. The amphitheatre

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* It is described by Martial as exceeding all other fabrics.

"Omnis Cæsareo cedit labor amphitheatro,
Unum præ cunctis fama loquatur opus."

Ammianus, in 350, mentions the Coliseum "Amphitheatri molem solidatam lapidis Tiburtini compage ad cujus summitatem aegre visio humana conscendit" Ammian lib xvi. And Cassiodorus in the time of Theodoric, in the year 500. "Hoc Titi potentia principalis divitiarum profuso flumine cogitavit ædificium fieri unde caput urbium potuisset" Cassiodor. lib. v. ep. 42 Bede relates that, in his time, in 735, the pilgrims who visited Rome were wont to say that the Coliseum was made to endure as long as the great globe itself,—"Quamdiu stabit Colyseus, stabit et Roma, quando cadet Colyseus cadet Roma, quando cadet Roma, cadet et mundus"

of Capua, of which little now remains, was next to the Coliseum in size.

This vast amphitheatre, built by Vespasian about the year 75, and completed by his son Titus, was 1702 English feet in its external elliptic circumference, which was composed of eighty piers, and as many apertures on each tier. The long axis of the external circumference is 612 English feet, the short axis 507, the height of the external wall 163.* According to Publius Victor, the Coliseum contained 77,000 seats.†

The external wall consists of four tiers, the three lowest with arcades and columns, the highest with rectangular pilasters and windows.

The external wall is of the calcareous tufa of Tivoli, called Travertine stone; the vaults on which the seats were supported are of large flat brick. Some of the pavement of the corridors is of small brick set in the herring-bone form.

The part that remains erect of the great external wall is the northern and long side, extending over about half of the original elliptic circumference,

* See Maffei, Verona Illustrata,—L'anfiteatro Flavio descritto e delineato dal Cavaliere Carlo Fontana, nell'Haia, 1725,—Les Edifices Antiques de Rome mesurés par Antoine Desgodetz, dédié à M. Colbert.—Architettura di Serlio.

† "Regio III, Amphitheatrum quod capit loca LXXVII Millia; in other editions LXXXVII Millia," P. Victoris de Region. Urbis Romæ liber.

the rest has been demolished for the sake of the materials, and the Travertine stone, of which it was composed, was used for building.

The arch of Trajan was demolished to form the arch of Constantine, and churches built in the time of Constantine are seen to be formed of columns taken from more ancient fabrics. And, afterwards, in the fifth century, the inhabitants of Rome were in the habit of demolishing ancient public edifices to employ the materials in building, as appears from an edict of Majorian, Emperor of the West, forbidding these dilapidations.

Theodoric was at pains to maintain the ancient fabrics in Rome, as appears from the writings of his minister Cassiodorus; an officer called Custos nitentium rerum had the charge of the ornamented public buildings and statues.

Barthelmy speaks of a letter in the Vatican which treats of an agreement between the Colonna and the Ursini, in the fourteenth century, about the right of taking Travertine stone (Tiburtinus) from the Coliseum.† The stones served both for building and for burning into lime. At that period, however, few building materials were wanted. The fabrics constructed in these times of anarchy were

* Novellæ Majorianæ, Lib. VI

† Mem. sur les Anc. Mon. de Rome, par l'Abbe Barthelemy, in the *Mem de l'Acad. des Inscript.* Vol. XXVIII.

only a few brick towers,* serving as fortresses, and erected upon the solid masonry of the ancient buildings; Rome being then thinly peopled, the inhabitants poor,* having neither arts, commerce, nor a regular government, and divided into factions at war with each other. The dilapidations, therefore, were for a long time inconsiderable, and confined to the interior parts of the amphitheatre. The building suffered most after the revival of the arts, when large palaces came to be erected, for which the squared Travertine stones of the Coliseum afforded a good material, and saved the trouble of quarrying and bringing the stones from the rock twenty miles distant. The exterior wall remained entire till the middle of the sixteenth century, when the nephews of Paul III. Farnese demolished a great part of the exterior wall, and employed the stones in building the Farnese palace. The palace of the Cancelleria, by Bramante, is also built of the Coliseum Travertine.

A strong and lofty buttress has been constructed by the reigning pope, Pius VII., to support the extremity of the remaining part of this external wall.

The perforations, which are numerous, between the stones of the piers in the outer wall appear to have been made for taking out the iron pins by which the stones were connected. The stones were laid

* Salengre Thesaurus Romanus; and Montfaucon Dia-

without mortar, as in the elliptic theatre at Pola and many other Roman fabrics. Maffei observed similar perforations in the stones of the Roman arch at Susa, and having made a perforation in one of the stones that was entire, he came to an iron pin, run with lead into a cavity in the bed of the lower stone.* Some of these perforations in the Coliseum seem also to have been made for the insertion of rafters to support the roofs of booths and small shops, which may have existed there during the middle ages.

Barthelemy, from a measurement he made in company with Jaquier, calculates that the external wall of the Coliseum would have cost, in his time, (1761,) a sum equal to L. 680,000 sterling; labour was then cheaper than it is now, and the external wall may be only a third or fourth part of the whole work.

The sanguinary exhibitions of the gladiators,† for which this fabric was constructed, were not abolished till the reign of Honorius.‡ In the year 1332 a bull

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rium Italicum Many treatises have been published concerning the perforations in the Coliseum.

* Maffei, Ver. Ill. The pins, which are sometimes of bronze, and the cavities for receiving them, are drawn in Piranesi, Antich. di Roma. Tom IV. tav. 6.

† Maffei, Ver. Ill.

‡ Seneca exclaims against the atrocity and the immoral effect of this Roman entertainment, which is said to have

feast was exhibited in the Coliseum, in which the Colonna and Ursini factions were conspicuous.* At that time, probably, the stone seats remained which are now entirely demolished.

Round the elliptical circumference of the arena are placed the altars or stations of the via crucis,† and two or three friars live in one of the damp vaults of the ruin, to officiate, and to receive the contributions of the charitable. The place is considered as holy, on account of the martyrdom of many of the early Christians, who were exposed to wild beasts in the arena.

been borrowed from the Etruscans, and which was unknown to the Greeks and other nations of antiquity. "Nihil vero est tam damnosum bonis moribus, quam in aliquo spectaculo desidere ... crudelior et inhumanior redeo ... Mane leonibus et ursis homines, meridie spectatoribus suis objiciuntur. Interfectores interfecturis jubentur objici, et victorem in aliam detinent cædem. Exitus pugnantium mors est, ferro et igne res geritur." Senec. Epist. 7. See also Cassiodor. lib. v. ep. 42.

* See an historical dissertation on the games of the middle ages, in Muratori, Antiq. Italic. Disser. XXIX.

† The *via crucis* is a representation of the different circumstances of the passion that occurred in ascending the hill to the crucifixion. It consists of a path, with a certain number of stations, at each station is a picture representing one of the events. The whole is intended to impress the mind with an image of the passion, and the devout Roman Catholic proceeds along the path repeating certain prayers at each station.

The French, when they had possession of Rome, made excavations in the arena, and found several sewers for leading off the water from the building.

The Pantheon.

The Pantheon was built by Marcus Agrippa, and restored, 230 years after, by Septimius Severus, and his son Marcus Aurelius Antoninus, called Caracalla, as the two ancient inscriptions attest. The first of these inscriptions is on the frieze of the portico, the other on the two bands of the architrave.* The third consulship of Agrippa, in which the portico was erected, happened in the twenty-seventh year before Christ. Adjacent to the Pantheon were the baths, which were amongst the many public works executed by Agrippa, the son-in-law and friend of Augustus.† He bequeath-

* On the frieze, in large letters, M. AGRIPPA. L. F. = COS. TERTIUM. FECIT.

The other, on the two fasciæ of the architrave, and in smaller letters. IMP. CÆS SEPTIMIUS . SEVERUS . PIUS . PERTINAX . = ARABICUS . ADIABENICUS . PARTHICUS . MAXIMUS . PONTIF. = MAX. TRIB. POT. XI. COS. III. P. P. PROCOS. ET.

IMP. CÆS. M. AURELIUS ANTONINUS . PIUS FELIX . AUG. = TRIB. POTEST. V. COS. PROCOS. PANTHEUM . VETUSTATE . = CORRUPTUM . CUM OMNI CULTU RESTITUERUNT.

† "M. Agrippa . . . qui tot in urbe maxima opera excitavit quæ et priorem magnificentiam vincerent, et nulla postea vincerentur." Seneca de Beneficiis, lib. 3.

ed these baths and the annexed gardens to the Roman people for the general use. He also constructed the aqueducts of the Aqua Virginis and Aqua Julia,* and formed 105 fountains, (salientes,) in the city; he restored the Aqua Marcia; he repaired the Cloaca Maxima, and other sewers, and constructed new ones.

The Pantheon was first dedicated as a church in 609, to the Virgin and the holy martyrs, by Saint Bonifacius IV., bishop of Rome. It is now called la Rotonda, and is dedicated to Santa Maria ad martyres.

The portico produces a noble effect, being supported by eight large columns in front, and eight columns within, and on the sides. The shaft of each column is of one piece of granite, forty feet in height. Two of the front columns at the east corner were awanting, and were replaced in 1660. The beams that formed the ceiling of the portico over the door were of bronze,† which Urban VIII., Barberini, took about the year 1630, and formed of it the canopy over the high altar of Saint Peter's, and the chair of Saint Peter. The two belfries are by Bernini, erected by order of Urban VIII. In

* Plin Hist Nat. lib. 36 c. 15.

† See a figure of these bronze beams in the Architettura di Serlio. lib. iii.

erecting these belfries, the middle of the second pediment was taken away. This second pediment is represented as entire in Palladio's drawings. The six projecting stones on the face of the second pediment, of which Palladio says he did not* conjecture the use, are supposed by Piranesi to have served for fixing tent poles on particular occasions, like the apparatus for fixing the tent poles that is seen on the upper tier of the Coliseum.

The round part of the building is constructed of brick, which was anciently coated with lime stucco. Some of the bricks are disposed in arches in the wall. The diameter within the walls is 140 feet. The height from the floor to the ceiling is also 140 feet. The portico has been added, and did not form part of the original design, as is visible in the cornices of the round building, which do not fit, and join those of the portico.

In the interior of the building the hemispherical surface of the cupola is covered with sunk quadrangular pannels, or cassettoni, which formerly contained ornaments. There are thirty-two pannels in the circumference, and five tier of pannels. The exterior surface of the cupola is a low curve. The round aperture at the top is not covered with glass,

* See the dimensions in Desgodetz, and in the Architett. di Palladio

so that the rain falls on the pavement, the lowest part of which is in the middle, and is perforated by holes, to allow the water to pass into the drain beneath. This exposure to the weather gives the interior a dirty appearance. The Tiber sometimes overflows so as to inundate the pavement of the Pantheon.

A fraternity of artists is attached to this church, and they have placed around the interior the busts of eminent artists and authors, natives or inhabitants of Italy. Some of these busts are representations of Raphael and Annibal Caracci, erected at the expence of Carlo Maratt;—Corregio,—Nicolas Poussin,—Palladio,—Mengs, the Saxon painter, erected by the Spanish ambassador Azara;—Piranesi the architect and copperplate engraver,—Angelica Kaufmann the painter; this lady was a native of the Tyrol,—Pichler the elder, the engraver of cameos and gems,—Bodoni of Parma, the eminent printer, —Corelli, the celebrated violin performer and composer,—Sacchini of Naples, the musical composer, —Winkelmann, erected by Reiffenstein;—Metastasio, who died in 1782, and many others. Several of these busts were erected at the expence of Canova.

The two Latin verses by Cardinal Bembo, under the bust of Raphael, are remarkable only for their extravagance, representing the Creator of the universe as emulous of a painter.

The place before the Pantheon is occupied by a fish market, and is in a state of excessive filth. The flat and low ground on which the Pantheon is situated was part of the Campus Martius. It was first built upon in the time of Leo X.,* who brought colonies from Lombardy and other regions to increase the population of Rome, and the site of the Campus Martius is now the most populous part of Rome. A part of it is still known by the name of Campo Marzo.

Trajan's Column.

The column erected in the beginning of the second century, in honour of Trajan, and sculptured with a representation of his victories in Dacia, was anciently surrounded by the forum of Trajan; and, some years ago, the ground was cleared away down to a pavement composed of squared flag stones, the pavement of the ancient forum. The shaft consists of twenty-three large blocks of white marble placed over each other, and perforated by a spiral stair-case, the newel of which is solid.

The solidity of the structure of the columns of Trajan and of Antoninus is proved by their having stood to this day. They are mentioned by Poggio

* Lancisi de cæli Romani qualitatibus.

in 1430, when all the obelisks in Rome lay prostrate, except the obelisk of the Vatican.*

The outer surface is sculptured with figures in relief, representing the expedition against the Dacians. The sculpture is excellent, and superior to that on the column of Antoninus; but on both columns the figures are too distant from the eye, and cannot be distinctly seen. The astonishing variety of expression in the figures is best seen in casts taken from the column.† The pedestal is adorned with trophies disposed in an agreeable manner. The joint between two stones often passes through the middle of the sculptured heads, and therefore Palladio is of opinion that the sculptures were executed after the stones had been placed. The height of the column, including the pedestal and capital, is 113 English feet 9 inches, a height, according to the ancient inscription, equal to that of the part of the adjacent Quirinal hill, which was removed to make the forum. The height of the column of Antoninus is eighteen inches less.

* Poggius de Varietate Fortunæ.

† The modellers of Rome obtain plaster casts of heads and parts of figures of the columns by means of a workman suspended from the top, who takes a mould in clay; from this mould one plaster cast can be taken, and then the mould becomes useless, by the shrinking of the clay.

To obtain a correct mould in plaster of all the sculptures on the column, would require an expensive scaffold.

The forum of Trajan, in which the column was situated, was magnificently adorned with sculptures by the able artists of that period, and was surrounded by porticos with one or more triumphal arches. The bas-relief sculptures of these arches were taken down and employed to adorn the arch of Constantine, on which they are seen to this day; the arts, at the time of Constantine, having fallen into decline, from which they did not recover till 1100 years after, were not able to furnish enough of sculptures for the arch, and what they did execute is far inferior to those taken from Trajan's arch. On the top of the column is a bronze statue of Saint Peter, placed there by Sixtus V.

Column of Antoninus.

The column in the piazza colonna was dedicated to Antoninus Pius, as appears from ancient medals. The sculptures represent the victories of his successor M. Aurelius over the Marcomanni, and other German nations. The column, it is supposed, was erected after the death of Marcus, which happened in 180. The sculptures are disposed in a spiral line, like those of Trajan's column, but are considerably inferior in point of execution and expression. It is impossible for a spectator placed on the ground to follow the histories on the column, unless, perhaps, by means of a telescope and much

time, the figures being at too great a distance; but the whole series of reliefs of the Antonine column is engraved by Bartoli, from drawings that were in the Barberini collection. The reliefs, as is seen in these engravings, represent battles,—the passage of rivers, —Marcus haranguing the troops, or the adlocutio, as seen on his coins;—camps,—burning of villages,—and the first series is terminated by trophies, and a winged figure of victory inscribing on a shield. This series is understood by antiquarians to represent the expedition of Marcus on the Danube and the Marus, now called the Morava. After the figure of victory, a second series commences, terminated at the top of the spiral by a triumphal procession, with Marcus on horseback, and is supposed to represent the expedition on the Granua, or perhaps the Elbe. One of the sculptures represents the rain in form of the Rainy Jupiter, or Jupiter Pluvius, which relieved the army suffering from thirst, as historians mention. Without the explanations drawn from written histories of the time of Marcus, these sculptures would be as unintelligible now as the Egyptian hieroglyphics.

The column was surrounded by the forum of Antoninus Pius, a part of which is now occupied by the Piazza colonna. The column had suffered injury by fires of the adjacent houses, and by a stroke of lightning. Sixtus V. in 1587, employed Domenico

Fontana to repair these, and placed the bronze statue of Saint Paul upon the top. *

The name of Columna Coclis is given to the columns of Trajan and Antonine, in Publius Victor's list of the fabrics of Rome.

There were two columns at Constantinople adorned with sculptures in relief, disposed spirally, like the columns of Trajan and of Antonine. One of these was erected in honour of Arcadius, and was demolished in the beginning of the eighteenth century, because the neighbouring houses were in danger of being injured by its fall. Of this column there are engravings, after drawings of Gentil Bellino, the Venetian painter, who was called to Constantinople by Mahomet II. †

The other, the column of Constantine, is called the burnt column, having been injured by fires. It consists of seven large cylinders of porphyry, exclusive of the base. ‡

There is an ancient column of antique red marble, four or five feet high, sculptured spirally with the representation of a triumph, in the gallery of the Colonna palace at Rome.

Copies of Trajan's column, two or three feet

* See Delle Fabriche di N. S. Papa Sisto V. fatte da Domenico Fontana Archittetto di sua santita, Rom. 1590.

† Banduri Imp. Orient. Tom. II.

‡ Winkelmann, Hist. de l'Art. liv. vi. chap viii de l'Art depuis Septime Severe jusquà son dernier sort.

high, with the bas-reliefs, have been made in gilded bronze by goldsmiths in Rome. The column erected by Bonaparte, in the Place Vendome at Paris, is an imitation of those of Trajan and of Antonine, but the reliefs are not sculptured on the column itself, they are only bronze reliefs applied round a stone column. Sir Christopher Wren's column, the Monument in London, is remarkable for its size, but has neither the sculptures nor the solid and massive structure of the two Roman columns.

Triumphal Arches.

The *Three Triumphal Arches* at Rome are those of Titus, of Septimius Severus, and of Constantine. The *Arch of Titus* is the most ancient of the triumphal arches now remaining in Rome. It is not so large a mass of architecture as either of the others, and is the only one of the three which has sculptures of a good style originally made for it. It has columns of the composite order. The sculpture is excellent, but in many places defaced. On each side of the arched passage are bas reliefs, the one representing the Emperor Titus, in a chariot drawn by four horses, and accompanied by soldiers, crowned with laurel. In the sculpture on the other side is seen the seven-branched candlestick, and other spoils of Jerusalem.* In the middle ages, a tower was

* See Reland de Spoliis Templi Hierosolomytani in arcu Titiano Romæ conspicuis 1716.

built upon this arch. The arch was undergoing repairs in 1818, by orders of the pope.

The Arch of Septimius Severus, in the forum Romanum, at the foot of the Capitolini hill, is perforated by three vaulted passages. The architecture is esteemed good, but the sculpture is poor, and is also much disfigured by time. Although these sculptures, executed at the beginning of the third century, are unskilfully designed, yet it appears from other monuments and statues, that there were still some able artists at that period, and during the third century.* The troubles that preceded the reign of Constantine, in the end of the third century, seem to have extinguished the school of arts, which was not revived in Europe till 1100 years after, in the fifteenth century. The arch was erected in honour of Septimius Severus and his two sons, as appears from the large inscription which occupies the upper part of the fabric. Caracalla, after he had murdered his brother Geta, caused the name of Geta to be effaced, but it is still legible under the additional line that was substituted. Barthelemy has published the original and the alteration.† The

* Winkelmann, Hist. de l'Art. liv. vi. chap. viii. de l'Art depuis Septime Severe jusquá son dernier sort.

† Memoire sur les Anciens Monumens de Rome par l'Abbé Barthelemy, in the Mem. de l'Acad. des Inscriptions, Tom. XXVIII.

triumphal arch built by orders of Bonaparte, in the Place du Carousel, at Paris, is copied chiefly from this arch of Septimius Severus.

The Arch of Constantine was erected in honour of that emperor, in the beginning of the fourth century, three years after he had got possession of Rome, by defeating the forces of Maxentius at the Milvian Bridge, the Ponte Molle. The sculptures in relief that represent the victories of Constantine are in a style that testifies how much the arts had declined. But a great many of the reliefs on this arch are in a good style, having been taken from an arch of Trajan that was in the forum of Trajan, near Trajan's column, and these sculptures represent huntings, and other actions of Trajan; * Trajan is represented with the golden circle called Nimbus over his head. †

The Arch of the Goldsmiths.

The small arch, or rather architraved gate-way, erected in honour of Septimius Severus, by the goldsmiths, is situated in the Forum Boarium near the Arch of Janus, and by the ancient church of San Giorgio in Velabro. The sculpture is in little estimation. The figure of Geta was erased by order of Caracalla.

* These bas reliefs are published in the Admiranda Romanarum Antiquitatum Vestigia, engraved by Bartoli.

† See Plin. panegyric.

The Arch of Janus.

The arch of *Janus Quadrifrons* is a quadrilateral mass of building, composed of large squared pieces of marble, and perforated by two spacious passages, so that each of the sides is occupied by a great arch, by the side of which are a number of niches. The buildings of this kind, called Jani, in ancient Rome, were used as places of meeting for merchants and money-dealers,* and were different from the temple of Janus. Thirty-six Jani are mentioned by Victor in his list of the fabrics of Rome. The temple of Janus Bifrons, which was shut in time of peace, was in the Forum Romanum, and of a different shape, as appears from its figure on ancient medals.

When Rome had passed from the command of one of the largest empires recorded in history, and had become in the middle ages a small place of 30,000 inhabitants, without government, and divided into several factions at war with each other, the chiefs of these factions erected towers, or fortresses, to defend their power. One of these brick fabrics is seen on the Janus, which was called the tower of Cencio Frangipani,† from the name of the baron who built the

* "Sed toto hoc genere de quærenda, de collocanda pecunia etiam de utenda commodius a quibusdam viris ad medium Janum sedentibus, quam ab ullis philosophis, ulla in schola disputatur."—Cic.

† *Cencio Frangipani* was a powerful baron in Rome in

tower. The tomb of Adrian became the tower of Crescentius, the greatest of all the fortresses; others are seen erected on the tomb of Metella, on the tomb of Plautius, on the arch of Titus, on the arch of Septimius Severus as figured in Donati. There was one on the Septizonium.

The Arch of Gallienus.

The arch of Gallienus, erected in honour of that emperor about 265, has no sculpture of human figures, and little merit in point of architecture.

The Arch of Drusus.

The arch of Drusus, near the gate of Saint Sebastian, is built of large blocks of Travertine stone, and is not ornamented with sculpture. One of the ancient aqueducts passed over this arch.

1119. Pandulphus Pisanus relates, that Frangipani dragged Pope Gelasius II. from the altar of the church, and kept him a prisoner in chains till the pope was rescued by the factions who opposed Frangipani.

Brancaleone of Bologna, who was governor of Rome, independent of the pope, in 1253, demolished in Rome and the vicinity 140 towers, used as strongholds by the rapacious and mischievous barons.

Fabricius, in 1550, mentions 360 towers in Rome, some of them at that time falling to ruin; see G. Fabricii Chemnicensis Roma, cap. 2. in Græv. Thes. Ant. Rom. Tom III.

Monument of the Aqua Claudia.

The magnificent fabric, which commemorates the Aqua Claudia at the Porta Maggiore, was a part of the arched edifice for conveying the two streams brought into Rome by Claudius, and formed at the same time one of the gates of ancient Rome. It was perforated by two arched-ways, one of which serves for the gate-way of the Porta Maggiore. Within the town, over the arched-ways, are three inscriptions of a great size, the largest that exist in Rome. The highest of the three commemorates the formation of the aqueduct by Claudius, the second its restoration by Vespasian, and the third the restoration by Titus. * There were two formæ, or conduits, for

* The three magnificent inscriptions, as given by Marlianus, are,

TI. CLAUDIUS . DRUSI . F. CAISAR . AUGUSTUS . GERMANICUS
PONTIF. MAXIM.
TRIBUNICIA . POTESTATE . XII. COS. V. IMPERATOR . XVII.
PATER PATRIÆ.
AQUAS . CLAUDIAM . EX . FONTIBUS . QUI . VOCABANTUR . CÆRULEUS . ET . CURTIUS . A MILLIARIO . XXXV.
ITEM . ANIENEM . NOVAM . A MILLIARIO . LXII. SUA . IMPENSA . CURAVIT.

IMP. CÆSAR . VESPASIANUS . AUGUST. PONTIF. MAX. TRIB.
POT II. IMP. VI. COS. III. DESIG. IIII. P. P

higher level, and consequently that conduit was above the other.

Pliny mentions the Aqua Claudia as a greater work than any of the aqueducts that preceded; it was brought from the distance of forty miles, on so high a level, as to supply the most elevated of the hills in the city. *

Other fountains were taken in near Sublaqueum,

AQUAS . CURTIAM . ET CAERULEAM PERDUCTAS . A DIVO
CLAUDIO ET POSTEA . INTERMISSAS . DILAPSAS . QUE
PER . ANNOS . NOVEM . SUA . IMPENSA . URBI . RESTITUIT.

IMP. T. CÆSAR . DIVI . F. VESPASIANUS . AUGUSTUS . PONTIFEX . MAXIMUS . TRIBUNIC.
POTESTATE . X. IMPERATOR . XVII. PATER . PATRIÆ . CENSOR . COS. VIII.
AQUAS . CURTIAM . ET . CÆRULEAM . PERDUCTAS . A . DIVO . CLAUDIO . ET . POSTEA.
A . DIVO . VESPASIANO . PATRE . SUO . URBI . RESTITUTAS .=
CUM . A . CAPITE . AQUARUM . A . SOLO . VETUSTATE . DILAPSÆ . ESSENT NOVA . FORMA . REDUCENDAS . SUA . IMPENSA . CURAVIT.

See Urbis Romæ Topographia Bartholomei Marliani, lib. iv. cap. xi.; also Grater's Collection of Inscriptions.

* "Vicit antecedentes aquarum ductus novissimum impendium operis inchoati a C. Cæsare et peracti a Claudio, quippe a lapide quadragesimo ad eam excelsitatem, ut in omnes urbis montes levarentur, influxere Curtius atque Cæruleus fons; erogata ad id opus sestertia 555,000." Plin. Hist. Nat.

now Subiaco, twenty miles above Tivoli, on the Anio, so that the whole length of the forma, or conduit, was forty-six ancient miles, of which thirty-six miles were subterraneous, and nine miles supported on arches. *

Egyptian Obelisks.

The obelisk is called by Herodotus οβελος, by the Italians guglia, needle. Pliny, Ammianus Marcellinus, and Publius Victor, mention six or seven large obelisks, and Publius Victor, in the time of Valentinian, enumerates forty-two small obelisks at Rome. † The number of Egyptian obelisks in

* See Frontinus de Aquæductibus urbis Romæ.

† "Obelisci magni sex.

II. In circo maximo major est pedum CXXXII. (now at the Lateran.)

Minor pedum LXXXVIII. semis, (now at the Porta del Popolo.)

Unus in Vaticano pedum LXXII. (now at Saint Peter's.)

Unus in Campo Martio pedum LXXII. (now at Monte Citorio.)

Duo in Mausoleo Augusti pares singuli pedum XLII. semis, (now at Santa Maria Maggiore and Monte Cavallo.)

In insula Tiberis unus, (this is not mentioned in the older editions.)

Obelisci parvi quadraginta duo. In plerisque sunt notæ Ægyptiorum." P. Victoris de regionibus urbis liber. Some of the lengths mentioned by Victor and Pliny do not agree with the actual measurement.

Rome at this day is twelve, of which eleven are erect, three are without hieroglyphics, and three are of a smaller size than the others. All are of large-grained red granite, and some of them are remarkable for their size. Each was originally of one piece, but some of the largest are broken into several pieces. This granite is of such a nature, as to resist the action of the weather, so that the hieroglyphics remain quite entire, after having been exposed for 3000 years. The hieroglyphics are in relief, but this relief is on the surface of the cavity sunk in the stone; the cavity is of the form of the outline of the figure, and serves to protect it.

In the time of Poggio, in 1430, all the obelisks were down, and most of them broken, except the obelisk of the Vatican.* The four obelisks of the Vatican, the Lateran, Santa Maria Maggiore, and the Piazza del Popolo, were erected by Sixtus V. about the year 1590. Other three obelisks of considerable size have been erected more recently at Monte Citorio, at the Trinita de' Monti, and at Monte Cavallo.

I. The obelisk of the Vatican is without hieroglyphics. It is of one piece unbroken, and was the only one that remained erect during the middle ages, near Saint Peter's. It bears an ancient inscription, which attests that it was dedicated to Au-

* Poggius de Varietate Fortunæ.

gustus by Tiberius. Its height to the apex is eighty-three English feet nine inches. It is seven feet seven inches square in the middle of its height, and its weight is above 300 tons.* It was removed to its present situation in front of the church by Domenico Fontana, by order of Sixtus V.

In 1584, it was erect near the old vestry of Saint Peter's, and was buried, by the accumulation of marshy soil, up to the top of the pedestal. The four lower angles rested on four pieces of metal, fixed with lead in the pedestal. There was an interval between the lower surface of the obelisk and the pedestal. The operations to remove it were as follows.†

The castellum.—A castellum, or shears, was con-

* The length, exclusive of the pyramid at the apex, is $77\frac{9}{10}$ English feet. The transverse section at the middle is $7\frac{6}{10}$ feet square. The solid contents are $166\frac{12}{27}$ cubic yards. Each cubic yard of granite weighs, as Smeaton estimates, 2 tons; the weight of the shaft of the obelisk, therefore, is upwards of 332 tons. The pyramid at top is upwards of 4 tons; and the whole weight of the obelisk, upwards of 336 tons.—The height of the shaft, excluding the pyramid at top, is $107\frac{1}{2}$ palms; each of the four sides at bottom is $12\frac{1}{2}$ palms, at top $8\frac{1}{2}$. the height of the pyramid at top is seven palms; the palm is taken at $8\frac{7}{10}$ English inches.

† See Della Trasportazione dell' Obelisco Vaticano e delle fabriche di nostro Signore Papa Sisto V. fatte dal Cavallier Domenico Fontana Architetto di sua Santita. In Roma, 1590.

structed, seven feet higher than the length of the obelisk.

The eight principal uprights, four on each side, were eighty-nine feet in height from the foundation. They were built of beams of oak and walnut, four beams in thickness; the ends of the beams making band, or not meeting; hooped at every nine feet with strong iron hoops, locked at two opposite points by iron wedges; the beams were also held together by iron bolts passing through them, secured by wedges in a slit at the end. Moreover, the four pieces were tied together at certain distances with bands of rope. The whole scaffolding was made so as to be put up again; it being first used in taking down the obelisk, and then removed and employed in erecting it. When the castellum was employed in erecting the obelisk, the principal posts were fixed in holes three feet square, in a Travertine stone platform, which was part of the foundation of the pedestal.

Coating of the Obelisk.—After the castellum, or shears, was erected over it, the obelisk was wrapped round with double mats, to protect it from injury. And over these it was covered with two-inch plank; then iron bars, four inches broad, three of them running along each face, connected in the length by stirrups, and connected together below the foot of the obelisk. They were introduced under the obelisk by the interval between the obelisk and the pedestal. The bars were kept close

to the planks by nine transverse iron hoops. The iron rods and hoops were for the purpose of fixing the blocks to. This coating of mat, wood, and iron, weighed about a twelfth part of the weight of the obelisk. Some of the hoops of iron broke in lifting the obelisk from its pedestal, and ropes were substituted, surrounding the obelisk transversely, and fixed by ropes which passed longitudinally under the foot of the obelisk. The ropes were found to stand better than the iron.

Lifting and Lowering the Obelisk.—The obelisk, covered in this way, was lifted up from its pedestal, by means of the capstanes and blocks attached to the iron hoops on the obelisk, and the blocks attached to the cross beams of the shears.

When the obelisk was lifted up two feet perpendicularly, a platform of wood was introduced under the foot of the obelisk. This platform was placed on wooden rollers, nine inches in diameter, hooped with iron at the ends. The ropes of the blocks attached to the four angles of the foot of the obelisk being then drawn, the platform bearing the foot slid along on the rollers, and the ropes of the blocks, attached to the upper part of the obelisk, being slackened, the obelisk descended gradually till it lay horizontal on the platform. During the descent, the obelisk was supported by two beams fixed to its middle, and moveable on an axis, that the ropes might not be strained.

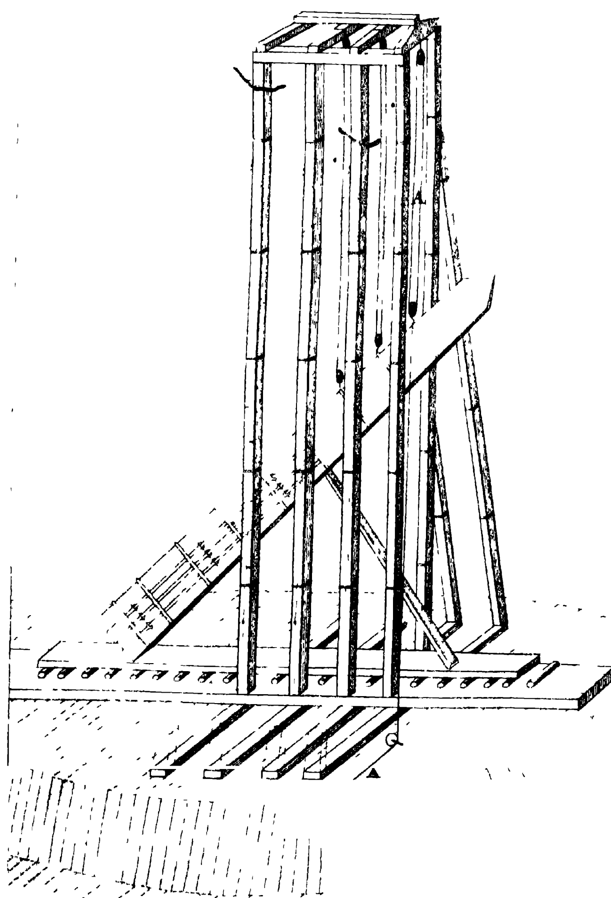
Removing the Obelisk.—A plane-way, of sufficient breadth, was formed by a mound of earth, from the first place to the present situation of the obelisk. The distance was about 100 feet. This plane-way had a gentle descent. The sides of the mound were supported by timbers, and cased with boards. The surface of the plane-way coincided with the top of the pedestal, on which the obelisk was to be placed, a mound of earth, strengthened by beams, having been raised round the pedestal.

Erecting the Obelisk.—After the obelisk had been taken down, and moved to the place appointed on wooden rollers, it was erected by means of forty-four capstanes; the capstanes were on the place round the mound; the ropes passed up to the mound from the capstanes on the place over pulleys, which gave the ropes their direction to the blocks at the top of the castellum or shears, and from these to the blocks fixed on three of the sides of the obelisk. The capstanes were fixed on the ground on each side, and each had four arms; at the first and third arm there was a horse, the second and fourth were each wrought by six to ten men. Four of the capstanes served to draw the foot of the obelisk forward, acting upon four blocks, one near each of the angles of the foot of the obelisk forward. The rest were employed in raising the obelisk till it was brought into a vertical position.

Foundation.—The foundation on which Fontana

General View of the Mechanism employed by Domenico Fontana for Removing & Erecting the Obelisk of the Vatican P 357

A is a Rope passing from the Obelisk to one of the 44 capstans. The transverse and diagonal timbers several of the Stays and other particulars are not drawn



erected the obelisk, was formed by an excavation forty-three feet square and twenty-four feet deep;* the bottom of this proving clay and wet, was piled with piles of oak and of chesnut, both with the bark taken off, eighteen feet long, and nine inches in diameter. The masonry in the foundation is of small broken stones of basalt and pieces of brick, with mortar made of lime and pozzolana.

At the time of the erection of the obelisk by Fontana, the edifice of Saint Peter's was considerably advanced. The windows and the erect part of the cupola was formed, but not the vaulted part.

Fontana is of opinion, that the upper part of this obelisk was broken off and a new point formed on it; because the height is not so many diameters as in the obelisk of the Lateran, and the point is less acuminated, and not so smoothly finished as the rest of the obelisk.

The obelisk reposed on four pieces of metal, which were firmly run in with lead into the pedestal, and a piece of iron, enveloped in the lead, was found uncoroded by rust. On the top of the obelisk was a hollow ball of bronze cast in one piece, in which were holes produced by musket bullets fired at it in the sack of Rome. It did not contain the ashes of any mortal; the vulgar belief was, that it contained the ashes of Augustus.

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* See the view in D. Fontana's book.

The largest masses of stone have been wrought by the Egyptians. Also, in the ruins of the temple of Balbec in Syria, there are blocks of granite of a very great size. Smeaton mentions one which, according to the measurement taken from the engraving in Wood's account of Balbec, weighs 1500 tons.*

The working of these large blocks is an art unknown to the Europeans both ancient and modern, and there are few rocks in which sound pieces of such a size occur.

Of the obelisks brought from Egypt by the ancient Romans, the obelisk of the Vatican is the largest that remains entire, and is the largest wrought stone in Europe. The obelisk of the Lateran was greater, but is broken into three pieces, which were moved separately when it was put up by Fontana. Another large mass of granite that has been moved in more recent times, is the block which serves as base to the statue of Peter at Petersburgh; but this block is not squared or wrought, being in the form in which it was found. It is an alluvial fragment, like other rolled stones, and was not quarried from the rock. The carriage on which it was conveyed moved on balls of metal, which fitted into semicylindrical grooves in the lower surface of the carriage.

* See Smeaton's Account of the Construction of the Edystone Light-house.

and in the upper surface of the beams of the way.*

II. The obelisk of Saint John Lateran is the largest in Rome, but is broken into three pieces. It lay buried in the soil of the Circus Maximus, which had become a marsh from the neglect of the sewers. The obelisk was removed from that to the distance of a mile and a half, and erected opposite the loggia of the church of the Lateran by Domenico Fontana. Its height is 107 feet; 3 inches. It is covered with hieroglyphics, of which Ammianus Marcellinus has given the explanation, taken from a Greek author, Hermapion. According to this explanation, the hieroglyphics form an inscription in praise of King Rhamestes. "The sun, the lord of heaven, bestowed power on the King Rhamestes; Apollo, the lover of truth and ruler of the seasons, and Vulcan, the father of the gods, chose Rhamestes for their warrior," and so forth.† This obelisk was placed before the Temple of the Sun at Heliopolis, and Constantine intended to remove it to Constantinople; but, on the death of Constantine, his son Constantius had it brought to Rome in the year 357.

III. The obelisk in the Piazza del Popolo, with hieroglyphics, seventy-nine feet, nine inches in

* See Carburi, Travaux pour transporter un Rocher Paris 1777.

† Ammian. Marcell. lib xvii., and Bargæi Commentarius de Obelisco in Græv. Thes. Antiq. Rom. Tom. IV.

height, was removed to its present situation from the Circus Maximus, and was brought to Rome by Augustus.

IV. The obelisk, without hieroglyphics, at Santa Maria Maggiore, forty-seven feet ten inches in height. It is broken into three pieces, and was brought from the mausoleum of Augustus. *

These four were erected by Domenico Fontana, and the machines he employed are described in his book. †

V. The obelisk on the place of Monte Citorio is of considerable size, with hieroglyphics. Many of the hieroglyphics are broken off, and the fractures have been repaired with the granite of the column of the Apotheosis of Antoninus; the sculptured marble pedestal of that column was found near Monte Citorio, and is now in the garden of the Vatican.

The erection of this obelisk, the largest that has been removed at Rome since the time of Fontana, was performed by the mechanist Zabaglia, about 1742. ‡ This obelisk was anciently erected in the Campus Mar-

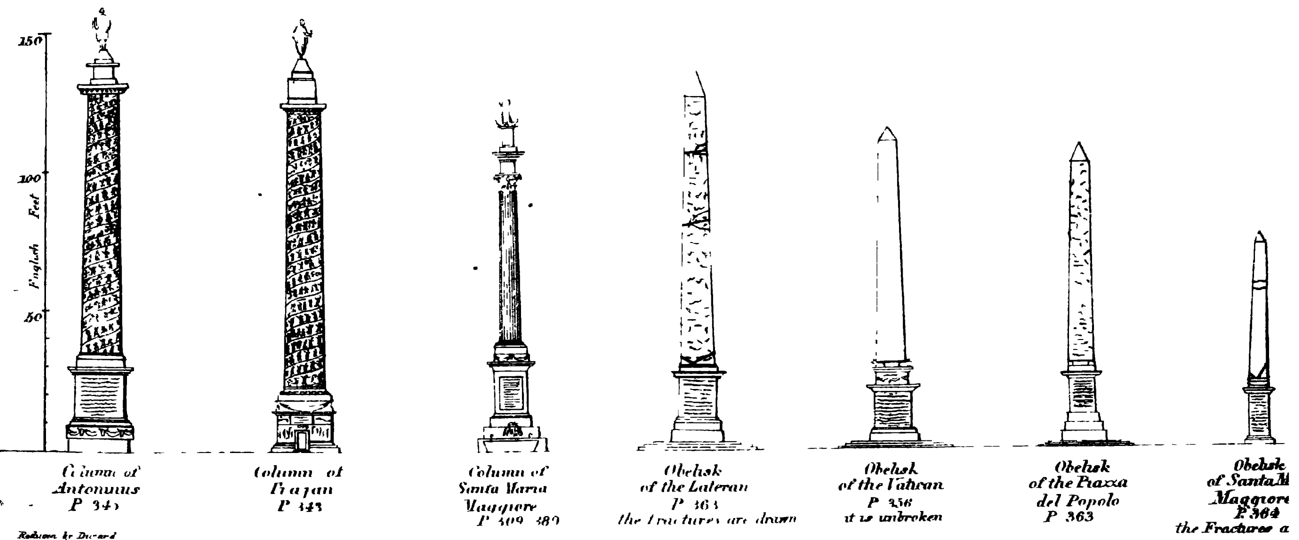
* A drawing of the fractures is given by Fontana.

† Della trasportatione dell' obelisco Vaticano, et delle fabriche di nostro signore Papa Sisto V. fatte dal Cavallier Domenico Fontana da Mili diocese di Como, architetto, di sua santita. In Roma, 1590.

‡ See an account of the inventions of Zabaglia, published by Bollari. See also p. 329.

COLUMNS and OBELISKS at ROME

Drawn on one Scale shewing their Size and the proportion they bear to each other



tius, not far from the place where it now stands; and on the pavement, proceeding northward from its base, Pliny relates, that a meridian line was drawn by order of Augustus, with marks to shew the length of the mid-day shadow, or the meridian height of the sun at different seasons of the year; the shadow of a ball on the top of the obelisk falling upon the mark which belonged to the day of observation.* Montfaucon mentions, that some fragments of this meridian line were found.†

VI. The obelisk at the Trinita de' Monti, covered with hieroglyphics, is forty or fifty feet long.

VII. The obelisk at Monte Cavallo, placed between the two colossal groups, appears to be forty feet in length. It is without hieroglyphics, and was anciently on the tomb of Augustus.

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* "Is obeliscus qui est in Campo Martio CX pedum est, a Mersotide inscriptus: rerumque interpretationem Ægyptiorum philosophiæ continet Cui Divus Augustus addidit mirabilem usum ad deprehendendas solis umbras, dierumque ac noctium magnitudines, strato lapide ad obelisci magnitudinem, cui par fieret umbra Romæ (brumæ *according to Salmasius*) confecta diei sexta hora, (*that is, at mid-day*,) paulatimque per regulas (quæ sunt exære inclusæ) singulis diebus decresceret et rursus augesceret, digna cognitu res, et ingenio fæcundo, Manlius Mathematicus apici pilam auream addidit." Plin. Hist. Nat.

† Montfaucon, Diarium Italicum and Marliani topog. Romæ.

VIII. The obelisk lying broken in two or three pieces in a court at the Belvidere of the Vatican, is of considerable size. On each of the sides that are seen there are two rows of hieroglyphics, the figures looking to the right of the spectator. It has no hieroglyphics inclosed in a border. The inclosed hieroglyphics are the proper name of the king, as Dr Young has shewn in his explanation of the stone in the British Museum, on which one and the same inscription is given both in Greek and in hieroglyphics.

The other obelisks are of a smaller size.

IX. The obelisk on Bernini's fountain, in the Piazza Navona, was brought from the Circus of Caracalla, where it lay broken.

X. The obelisk, with some hieroglyphics, apparently twenty feet high, in the garden of the Villa Mattei.

XI. The obelisk in the place before Santa Maria della Minerva, with hieroglyphics, is fourteen feet three inches in height. It is, perhaps, only a fragment of an obelisk, as its height is only five diameters to the foot of the pyramid at top, whereas the height of the Lateran obelisk is nine or nine and a half.

XII. The obelisk, with hieroglyphics, on the piazza before the Pantheon, is ten or twelve feet in length.

Part of the shaft of a broken obelisk with hiero-

glyphics, is placed before the church of Saint Bartholomew, in the Isola Tiberina. *

The Via Appia leading to Capo di Bove.

Tomb of the Scipios.—On the left hand of the road, before going out of the city, is the tomb of the Scipios, discovered in 1780. A gardener's house is perched upon the ruins of the tomb, and underneath are the vaults in which was found the parallel-sided urn, or sarcophagus, of Piperino, now in the Vatican museum, two busts, and some inscriptions, of which copies are placed in the vault. The inscription on the urn is one of the examples of the ancient Latin before it was refined; † other examples are the fragment of the inscription of Duilius, in the Capitol, and the hymn of the Fratres Arvales, in the vestry of Saint Peter's. Before the situation of the tomb of the Scipios was ascertained by the discovery of this urn, the tomb on the Via Appia, opposite to the church Domine quo vadis, was supposed to be the tomb of the Scipios. ‡

From the Porta San Sebastiano, anciently Porta Capena, we proceed along the road which was anciently the Via Appia, the ground on each side of which is occupied by market gardens. The small

* It is figured in Piranesi, Ant. di Rom Tom. IV. tav. 14.

† See the inscription, in a subsequent page in the account of the museum of the Vatican.

‡ Piranesi, Antichita di Roma, Tom. II. tav. 28.

houses, inhabited by those who cultivate the gardens, are perched as it were on rocks, on the ruins of ancient tombs. These tombs are composed of masses of small fragments of stones and pozzolana mortar, a kind of masonry which possesses great firmness, and has resisted the action of time, whilst the external ornaments of the fabric have perished.

On the right hand near the road is the church of Saint Sebastian, which is one of the seven basilic churches of Rome, and from which there is a descent leading into a set of catacombs or tombs, formed by the ancient Christians in the old quarries of pozzolana.

Circus of Caracalla.—On the other side of the road is the Circus of Caracalla. The spine running along the middle of the oblong space which constitutes the circus, and on which the obelisk and metae stood, is still visible. This is the only fabric in which the form of the ancient circus can be traced. The circus Maximus and others are utterly destroyed. The figure of the circus is seen on some ancient coins.

The Egyptian obelisk, now on Bernini's fountain in the Piazzo Navona, was removed from this circus of Caracalla, where it lay broken, about the year 1650, by Innocent X. Pamfili.

The half arches, forming a projection from the wall that surrounds the circus, are composed of large narrow-mouthed earthenware pots, of an oval form,

and about eighteen inches in diameter. These pots are imbedded in the mortar, but have no mortar within them. Each pot has a narrow mouth and two handles. These pots occur also in the ancient fabric called the tomb of Saint Helena, at Tor pignatara, near Rome, and in other fabrics; they are figured by Piranesi.* They were used for the purpose of diminishing the weight of the arch.

The walls of the circus are of brick, and near it is a lofty quadrangular building of brick called the Stables of the Circus, and considered by some to have been a market.

Tomb of Metella.—Farther on the road ascends, and on an eminence is the round building which formed the sepulchre of Caecilia Metella, daughter of Quintus Creticus, and wife of the Triumvir Crassus, as is attested by the ancient inscription in large letters below the frieze.†

This massive structure has a square base, on which is placed a circular building, 88 feet 6 inches in diameter,‡ the exterior of which is of large blocks of Travertine. The void space within is in form of a

* Piranesi, Ant. di Rom. Tom. III.

† *Caecilia.*
Q. Cretici.
Metellæ.
Crassi.

‡ Piranesi. Ant. di Rom.

cone, and about twenty feet in diameter at the widest and lower part. The mass of masonry is of great thickness, composed of mortar and small fragments of stone cast in irregularly. The blocks of Travertine which form the exterior are built in along with the irregular mass, and, according to Piranesi, the blocks are fixed together by cramps of iron inserted in cavities formed in the beds and run in with lead. This kind of building with irregular masses of stone is seen in many other ancient buildings; at the distance of every three or four feet there is a level course of regularly laid pieces.

Within the tower was found, in the time of Paul III. Farnese, the large sarcophagus of white marble now in the court of the Farnese palace. The tower is surmounted with battlements constructed in the middle ages, and there are buildings of the same period attached to the tower. Over the gate of this castle is the armorial bearing of the Gaetani family, a bull's head, for which reason the whole building is called Capo di Bove. It was an important fortress, and gave protection to a small town of several habitations that are built around it, during the long period that the rival factions of the Colonna and Ursini, and other families, were contending for the command of Rome and the neighbouring district.

The tomb of Cecilia Metella forms the extremity of one of the bases measured by the learned mathe-

matician and Jesuit, Boscovich, in his geometrical survey of the ecclesiastical state.

Near Capo di Bove is a dike or vein of basalt, which is considered by some geologists to have been formed by a current of lava that flowed before the times recorded in history, from the volcanic hills of Albano. This basalt is not divided into polygonal columns; but columnar basalt is to be seen near Bolsena, on the road between Rome and Siena.

This basalt of Capo di Bove was quarried by the ancient Romans, and formed into their large pavement stones, such as are still seen in ancient pavements of the Via Appia, near Capo di Bove, also between the arch of Titus and the arch of Constantine, and in other places. In these ancient pavements the surface of each stone is one or two square feet. The figure of the upper surface of the stones is an irregular polygon. The breadth of these ancient Roman paved roads is about twenty-five feet.

The streets of modern Rome are also paved with basalt from Capo di Bove, but the stones are small, the upper surface of each being only two or three inches square. To form the pavement these stones are imbedded in mortar made with pozzolana, which becomes very hard. This pavement is defective on account of the small size of the stones.

From the eminence of Capo di Bove are seen the long ranges of lofty arches of the ancient Roman aqueducts. The arches are composed of large flat

bricks, two feet square, called in Rome tavoloni. And the Acqua Felice, one of the three aqueducts used for the supply of modern Rome, is seen supported upon arches by the side of the ancient.

Walking through the fields from Capo di Bove we pass an ancient temple of a quadrangular form, situated on the rising ground. It is built of brick, and is supposed to have been dedicated to Bacchus. It is now a half deserted chapel.

Fountain of Egeria.—In the hollow is the grotto and fountain della Caffarella, which is understood to be that which was consecrated to the nymph Egeria, from whom Numa pretended to receive his laws.* The spring of water rises under a lofty antique vault, the walls of which are covered with Opus reticulatum. A mutilated recumbent statue is placed above the source. There is one niche in the end wall, and three niches on each of the sides.

Following the course of the sluggish and muddy brook Acquataccio, anciently called *Almo*, into which the water of the fountain runs, we pass a small quadrangular temple of brick, called the temple of

* "Egeria est quæ præbet aquas, dea grata camœnis.
Illa Numæ conjux consiliumque fuit."—Ovid. Fast. 3.

See also Livy and Plutarch. Juvenal complains that the grotto was adorned with too much neatness, and not in the rural manner, as a grotto ought to be, with mossy margin and natural rock. Time has now again brought the grotto to the rustic form that Juvenal wished for.

Rediculus, the deity to whom the Romans ascribed the retreat of Hannibal, when he quitted his encampment near Rome.* The architecture, however, of this temple is evidently not of such remote antiquity as the time of the republic. The Acquataccio receives the water of a spring called Acqua Santa, which is used for curing cutaneous diseases in cattle, and also for some affections of the human body. The Acquataccio runs parallel to the Via Appia; it does not pass through Rome, but falls into the Tiber a little below the city.

Proceeding, we enter Rome again by the Porta San Sebastiano.

Ancient Baths.

The *baths of Titus*, the Termi di Tito, are situated not far from the Coliseum, and consist of large vaulted halls, which are in part subterraneous, the building being applied to the side of the hill. In these vaults were the baths, and on the story above them may have been halls for exercise, libraries, and other rooms. Where the vault is broken, the light of day is admitted; the halls, whose vaults are entire, are quite dark,

* "Rediculi fanum extra portam Capenam Cornificius ait fecisse, qui Rediculus propterea appellatus est, quia accedens ad urbem Annibal ex eo loço redierit quibusdam visis perterritus." Fest.

and in order to render visible the fresco paintings on the lofty ceilings, the keeper is provided with lighted tapers fixed on a long reed. The walls and vaulted ceilings of the different apartments are covered with stucco, the surface of which is smooth, and on this smooth stucco the fresco paintings are executed. The stucco is composed of quicklime and pounded marble, and was susceptible of being polished after it was dry. These paintings consist of the ornaments called grottesque, which include, in different places, pictures in which the human figure is painted in an excellent style; the colours are well preserved.

Raphael, and his pupil Giovanni da Udine, copied this fanciful kind of ornament in the loggie of the Vatican; and the word *grottesca* was applied to ornaments of this kind, from the circumstance of their occurring in the grottos or subterraneous halls of the ancient ruins at Rome

These are the principal ancient fresco paintings now remaining in Rome. Engravings of them are published. Since the publication another apartment has been cleared of rubbish by the French. The celebrated antique fresco picture, the Aldobrandini Marriage, in which the marriage of Thetis and Peleus is represented, was found near Santa Maria Maggiore, and was at this time (1818) for sale in Rome, in the possession of Signor Nelli. Having been detached from its original wall, it is fixed in a frame. The

colours have suffered and lost their lustre. A copy of this picture by Nicholas Poussin is to be seen in the Doria palace in Rome. Other fresco paintings and ceilings, ornamented with stucco in relief, have been found at Rome, and the neighbourhood, in Adrian's Villa, in the sepulchre of the Nasonii, in the pyramid of Cestius, and in other tombs. *

The ground incumbent on the vaults of the baths of Titus is occupied with saltpetre beds, composed of alternate layers of stable litter, and the rubbish of old walls, and placed under lofty sheds open at the sides.

In the adjacent market gardens is the ancient ruin called the *Sette Sale*, which contained the reservoirs of water for the baths.

The celebrated group of Loucoon, now in the Vatican, was found in 1506, in the time of Julius II., in the ruins of the palace of Titus near these baths. It is supposed to be the statue described by Pliny.

The baths of Diocletian, or Terme Diocletiane, form one of the most extensive ruins in Rome; they were built and dedicated by that emperor, in the year 304, a few years before he abdicated the empire. †

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* Some of them are figured in Cameron's Ancient Baths, in Bartoli Sepolchr. Ant.; in Piranesi, Ant. di Rom.

† See the Inscription in Gruter, Inscrip. p. 178.

The Thermæ, in ancient Rome, were places of public resort, and contained, besides the baths, porticoes for walking, places of exercise, large public libraries, and schools for various sciences.

The size and magnificence of the baths in Rome in the time of Nero are described by Seneca, in his 86th epistle, and compared with their simplicity in the time of the elder Scipio.

These baths of Diocletian covered a great space of ground, and much of the building yet remains, consisting of massive brick arches. The vestiges of the square, which included the whole edifice, are represented as measuring 1196 English feet each side. * Some parts of the building are now occupied as warehouses for keeping oil, and as granaries, formed about 1710, by Clement XI. Albani. The oil magazines belong to the papal government; they are subterraneous, and vaulted over like a cellar. In the floor are formed the pozzi or wells for containing the oil. These wells are, perhaps, ten feet deep; their aperture at top is three or four feet in diameter; they are made of mortar, which, like all the mortar used in Rome, is composed of lime and pozzolana, and acquires great hardness. Round the wall of the cellar is a range of masonry raised

* 1650 palms, Piranesi, Antichita di Roma, Tom. I.

two or three feet from the floor, containing smaller oil cisterns, likewise of mortar.

After a design of Michael Angelo Bonaroti, one of the spacious halls of the baths, said to have been the Pinacotheca, or picture gallery, was converted into the church of the Certosa or Carthusian monastery, dedicated to Santa Maria degli Angeli. Farther decorations were afterwards added under the direction of Carlo Maratti, whose tomb is in the round vestibule of the church, opposite to that of Salvator Rosa. The church is in form of a Greek cross. Two hundred columns anciently decorated these baths, and eight of these of granite still remain in the church. These columns are of different lengths; and, in order that the visible parts of the shafts may be equal, the longest ones have the lower part sunk in the ground, the ancient pavement having been elevated by Michael Angelo.

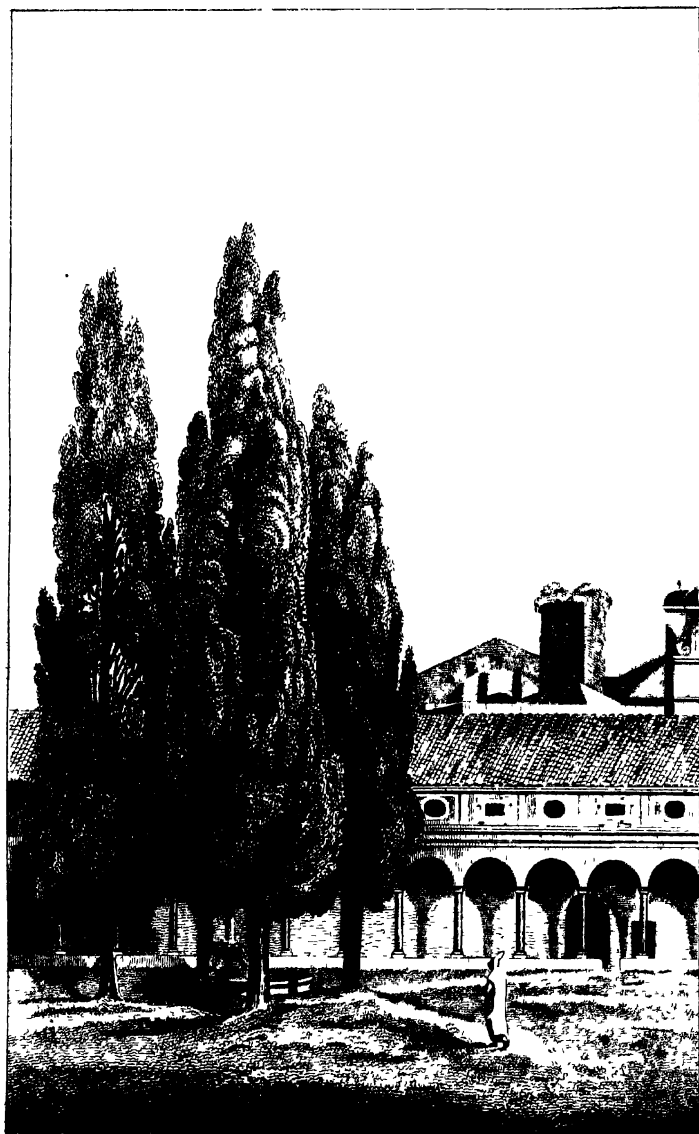
Diocletian did not import the columns from Egypt, but only collected them from other buildings, constructed in the more flourishing times of Rome. The graphic arts had declined much at the time of Diocletian, as is visible in his medals. The baths of Diocletian are now a great mass of arched brick building, completely stript of the columns and marble incrustations, but there is a specimen of the architecture of that period in the palace of Diocletian, at Spalatro in Dalmatia, of which there are good engravings, with a description

published by Adam.* The use of round arches, springing from the entablature of the columns, is seen in the palace of Spalatro, a practice which afterwards passed into the round-arched style of the middle age.

In this church of the Certosa is a long meridian line drawn on the pavement, in 1701, by Bianchini, on which the image of the sun is received from a window in the upper part of the building. The declination of the principal stars is marked on the line, and a note of certain remarkable events is made by the side of the line, opposite to the day of the month on which they happened. The apparent orbits described by the polar star, as visible through an aperture in the window, during eight hundred years, to the year 2500, are projected in ellipses on the pavement, near the meridian line.

In the church are several pictures, of which there are copies in mosaic in Saint Peter's, and a picture in fresco, of the martyrdom of Saint Sebastian, by Domenichino. Near the church is the cloister of the Certosa, of 100 moderate-sized columns, the work of Michael Angelo. The architecture is simple and pleasing, with few ornaments. It forms the four sides of a square, and consists of a corridor, with an open arcade, and above that an attic story.

* The ruins of the palace of Diocletian at Spalatro, by Robert Adam, architect, London, 1764.



Bourgeois delt — Lowry Sculp

OLD CYPRESSES, AND PART OF THE CLOISTER OF THE CERTOSA.
in Diocletians Baths, at Rome P.378 379

The number of arches on each side is twenty-five. The columns, supporting the arches, are about twelve feet high, of stone, and the whole is plastered and whitened. It is the largest cloister in Rome. In the middle are three fine old cypresses.

The remains of the Thermæ Antoninianæ, or *baths of Antoninus Caracalla,* situated in the market gardens on the Aventine hill, consist of lofty and extensive brick walls, with arches. They were built by the son of Septimius Severus, who is styled on inscriptions Marcus Aurelius Antoninus Pius, but is known in history by the appellation of Caracalla, which was a nickname given him from a kind of cloak used in Gaul, called Caracalla, which he distributed to the people of Rome.* The space of ground they covered appears nearly equal to the extent of Diocletian's baths. According to architects, the vestiges of the extreme precinct in which these baths were included, forms nearly a square, each side being 1160 English feet.† In these baths of Caracalla were found the celebrated statues, called the Farnesian Bull, the Hercules Farnese, and the Flora Farnese, which were formerly in the Farnese palace at Rome, and are now at Naples.

* "Vixit diu in odio populi Antoninus, quamvis et vestimenta populo dederit, unde Caracallus est dictus, et Thermas magnificentissimas fecerit." Spartian.

† 1600 palms. Piranesi, Ant. di Roma, Tom. I.

The *baths of Livia*, situated on the Palatine hill, are subterraneous, and of much smaller extent than the three above mentioned.

Castel Sant Angelo.

The Moles Hadriani was built by that emperor, as a sepulchre for himself, and for persons of the imperial family; * and was also the tomb of his successors, the Antonines. In the siege of Rome, in 537, the Romans made use of it as a place of defence, and threw down the statues and other ornaments upon the assailing Goths. † Its remains consist of a round building, 219 English feet in diameter, ‡ placed on a large square base, and composed of a great mass of masonry, of courses of irregular fragments of stone and mortar. These courses are bound together by large squared blocks of piperino, § placed at a distance from each other. The exterior is also composed of large squared stones. This kind of masonry, called emplecton by Vitruvius and Pli-

* "Sepultus est Hadrianus in ripa fluvii, juxta pontem Ælium. Illic enim sepulchrum conditum. Jam enim Augusti monimentum repletum erat; nec quisquam amplius in eo sepeliebatur." Dion.

† See Procopius de Bello Gothico, and Winkelmann, Hist. de l'Art.

‡ 302 palms. Bartoli, Sepolchri Antich.

§ Piranesi, Ant. di Rom. Tom. IV.

ny,* is of great solidity, and is seen in many tombs and other ancient buildings at Rome.

In this mass of masonry there were some sepulchral chambers and passages, small in comparison to the whole mass, as is seen in the section given by Bartoli.

It is similar in form to the mausoleum of Augustus, of which there are some remains; and several ancient Roman tombs exist like these two, both in their cylindrical form, and in the nature of the materials of which they consist; such are the tomb of Metella, of Plautius near Tivoli, and of Munatius Plancus near Gaeta. †

In the middle ages, there were fortresses on the Coliseum, the baths of Titus, at the arch of Titus, on the Janus, and a great many others occupied by the powerful families. Of these fortresses, the Moles Hadriani was the most important, both from its situation commanding the entrance to Rome, and by reason of its massive structure.

When the Pons Milvius was broken down during the middle ages, and impassable, the sepulchre of Adrian served to command the Ælian bridge, which was then the only entrance into Rome from the

* "Emplecton, tantummodo frontibus politis, reliqua fortuito collocata." Plin. Hist. Nat. 36, cap. 22. See also Vitruv. lib. ii. cap. 8.

† See Bartoli, Sepolchri Antichi.

north. In the ninth, tenth, and eleventh centuries, it was occupied as a fortress, sometimes by the popes, sometimes by their adversaries; from one of these it was called the tower of Crescentius. In the eleventh century, it was sometimes called the house of Theodoric.*

The upper works of brick were built on the ancient solid mass by Alexander VI. Lencoli, father of the infamous Cæsar Borgia. Clement VII. was besieged in this castle by the troops of Charles V. Benvenuto Cellini was with the pope, and acted as chief gunner to his holiness.† The Moles Hadriani is now called the Castel Sant Angelo, from the vision of an angel sheathing his sword, which Gregory the Great saw resplendent on the top of the mole, when that pope went to offer up prayers for the deliverance of Rome from the pestilence.‡ A statue of this angel is placed on the top. The building was surrounded by a ditch and rampart, in form of a pentagon, with bastions, by Urban VIII. Barberini. It is now garrisoned, and used as a prison for criminals.

There is a communication between the castle of Saint Angelo and the Vatican palace, by means of a covered gallery, which was constructed about the

* Donat. de Urbe Rom. lib. iv. cap. 7.

† Benvenuto Cellini's Life, written by himself.

‡ Donat. de Urbe Rom. lib. iv. cap. 7

year 1500, by Alexander VI. On certain festivals, a great fire-work, composed of multitudes of rockets, called the girandola, is discharged from the castle of Saint Angelo; and proves that the Roman artificial fire-workers are deservedly famous. This girandola was exhibited this year, 1818, on the evening of the pope's birth-day, a few days after Easter.

Mausoleum of Augustus.

Not far from the Porta del Popolo is the Mausoleum of Augustus, now much dilapidated and concealed by modern buildings. It was built by Augustus.* It was circular. The Moles Hadriani was afterwards constructed of that form. The diameter 139 English feet. † The walls that still remain are of great thickness. The Campus Martius, in which this mausoleum was situated, extended, according to Nardini, from the Pantheon, up along the Tiber about an English mile, to near the Porta del Popolo, and perhaps farther up, towards the Ponte Molle. It was laid out in grass, and was used for a place of exercise and recreation, as the public walks in the vicinity of London, Paris, Vienna, or Florence.

The Campus Martius is the principal object in the following description of Rome given by Strabo.

* Sueton. in Augusto, c 100.

† 192 palms. Bartoli, Sepolcri Antich

"The ancient Romans attended little to the embellishment of Rome, being occupied with more urgent affairs; but their posterity, and especially the princes of the present day, have not been defective in this, having filled the city with numerous and beautiful buildings. For Pompey, Cæsar, Augustus, his sons, his friends, his consort, and his sister, exceeded the liberality and activity of all their predecessors, in the edifices they erected for the public use. The greatest number of these buildings are in the Campus Martius, which is adorned by nature and by human art, for the magnitude of the plain is admirable, and it is accommodated to chariot and horse races, and to the multitude of people who are engaged in playing at ball, in the game called circus, and in the palestra; likewise the edifices that surround it, and the ground laid out in grass, which is green all the year, and the crowns of hills which come even to the river, form a scene which the spectator does not willingly leave. Near this plain is another plain, and many porticos all around and groves, and three theatres, an amphitheatre, and magnificent temples, numerous and close to each other, so that the city appears only an accessory and secondary object in respect to the Campus Martius. Therefore, in this place, which is considered as most sacred, the monuments of the most illustrious citizens are erected; the most remarkable of these is that called the mausoleum, a building of white

stone erected on lofty arches by the river, and ornamented to the top with evergreen trees; on the summit is a statue of Augustus; in the vaults are the tombs of Augustus and of his relations and domestic friends; behind is an extensive grove with beautiful walks. In the middle of the plain is the funeral pile of Augustus of white stone, surrounded by a circular iron rail, which incloses a plantation of alders, (αιγειροις,) and if the spectator proceeds to the old forum, and views the many temples and basilic porticos, and if he then inspects the capitol and its splendid works, and those of the Palatium, and the covered walk of Livia, he will easily forget every thing out of the metropolis. And such is the city of Rome."*

The beauty of the Campus Martius has perished; it is now occupied by houses, and is one of the most populous parts of the city. †

Temple of Antoninus.—Near the Piazza Colonna are eleven large columns of Marmo Greco, supporting a cornice, supposed to be the remains of the temple erected to Antoninus Pius, in the Forum of Antoninus. It is now the front of the land custom-house.

* Strabo's Geography, Book v. written in the reign of Tiberius.

† See page 343.

Forum Romanum and Ancient Buildings in its vicinity.

The Forum Romanum is now a large open place with a double row of small trees, unpaved, and used as a cattle market; and, therefore, called the Campo Vaccino. It contains many remains of ancient buildings.

At the extremity near the Capitoline hill is the *Arch of Septimius Severus*.

The three very large fluted Corinthian columns of Marmo Greco, with their entablature, which formed the angle of the portico, are supposed to be part of the *Temple of Jupiter Tonans*.

The eight Ionic columns, each of one piece of granite, with their architrave, are the remains of the *Temple of Concord*; six of the columns formed the front of the portico. This edifice was repaired in the time of Constantine, as appeared from an inscription that is now gone; and Winkelmann says, that a remarkable mistake has been committed in placing two of the columns with their diminished part undermost.

An insulated Corinthian column of Marmo Greco, from the pedestal of which the earth has lately been

* Winkelmann, Hist de l'Art, liv. vi. chap 8 de l'Art sous les Empereurs.

removed, and the inscription discovered, which shews, that the column was erected in honour of the Emperor Phocas, by Samargdus, Exarch of Ravenna, about the year 608. The column is not of that period, but had been taken from some more ancient building. Marlianus conjectured the use of this column.*

The three large columns supporting a straight piece of cornice, are supposed to be the remains of the temple of *Jupiter Stator*.

Farther on, and on the other side of the Campo Vaccino, is the portico of the *Temple of Antoninus and Faustina*, erected in 168, by M. Aurelius. This portico consists of ten large columns, each of one piece of Cipollino marble,† with Corinthian

* "Stat adhuc in foro unica columna cui ut videtur nil erat adjunctum ideo honoris virtutisque causa alicui horum positam fuisse existimamus, presertim quod in uno latere plinti cernuntur adhuc quædam literæ sed vetustate ita consumptæ, ut nullum percipias sensum." Urbis Romæ topographia B. Marliani, Roma, 1511.

† Cipollino marble is an antique marble, that is to say, it is now not quarried from the rock, but only got in the remains of ancient buildings. It contains mica, and belongs to that formation of rocks called primitive, and consists of shistose layers, which form veins in parallel straight lines running longitudinally along the surface of the columns. The veins are of a light green colour. From the colour and also from the shistose structure, by which qualities this marble resembles a leek, *cipollo*, the name Cipollino is given to it. Seve-

capitals, and supporting an entablature of large blocks of marble ; six of the columns are in front. On the frieze is inscribed *Divo Antonino et Divae Faustinae ex S. C.* Faustina, the daughter of Antoninus Pius, and wife of Marcus Aurelius, was declared a goddess, after her death, by the senate, at the request of Marcus. Her irregularities are recorded by historians. * Behind the portico is the church belonging to the corporation of druggists, Santa Maria in Miranda de' Speziali.

Nearer the Coliseum is the circular *Temple of Remus,* which serves as the vestibule to the church of Santi Cosmo e Damiano. On the hemispherical vault of the Tribuna or Apsis is some Mosaic of the middle ages ; and in the subterraneous church underneath, the light of day shines, with a yellow colour, through a thin slab of pavonazzato marble, placed like glass in a window.

Next are the three large brick arches, the remains of the magnificent *Temple of Peace,* built by Vespasian about the year 77. † The vault of the middle arch is a portion of a sphere, the two others

ral columns of this marble, lately brought from the eastern part of the Mediterranean, are seen in the court of the British Museum.

* Hist. Aug.

† " Templum pacis D. Vespasiani Imp. Augusti pulcherrima operum quæ unquam." Plin. Hist. Nat.

are cylindrical; all the three are adorned with sunk pannels.

All that now remains of this temple is of brick, stripped of the marble with which it was formerly ornamented. One of the columns was in place, and removed, about 1610, by Paul V. Borghese, to the piazza of Saint Maria Maggiore, where it now stands. This column is of the shistose marble, called Cipolino, and of a great size;* it stood by one of the piers that support the arches of the temple, as is seen in old views. Palladio has given a design of what he supposes this temple to have been when entire; he considers the three arches as forming the side of the temple in the interior, and the front with the pediment, he supposes, was at right angles to the wall which closed the back part of the arches.†

On the other side of the Forum Romanum is the *Arch of Titus*.

Nearer the Coliseum are two *tribune* ornamented with sunk pannels, supposed to be the remains of the *Temple of the Sun*.

Forum of Nerva.

The remains of the forum of Nerva consist of a large wall of piperino, perforated by a semicircular

* See page 309 and page 357.

† Architettura di Palladio. The same plan is given in Mar-liani Topogr. Rom.

arch called l'Arco dei Pantani, and of three fluted Corinthian columns, the shafts of which are composed of several pieces. The foliage of the capitals is pretty well preserved. The foliage of the capitals at the pantheon is broken off.

The volcanic stone called piperino, of which the wall of Nerva's forum is built, is quarried near Marino, on the Latian hills. It does not occur so frequently in buildings at Rome as the calcareous tufa of Tivoli, called Travertine.

On taking down a wall of the forum of Nerva, the stones were found to have dove-tailed cavities, into which a piece of wood was fitted, connecting the two adjacent stones. The wood was still entire, as Montfaucon relates.* The same contrivance is described by Piranesi, in another ancient building.†

Near the forum of Nerva is a temple or altar of Pallas, with two Corinthian columns, called the Colonacce, and a fine figure of Minerva, in relief, of a large size, on the attic. This edifice is said to have been a part of the forum of Domitian, and is cited by Winkelmann as a specimen of the art in the time of that emperor.‡

Palatine Hill.—On the brow of the Palatine hill are the massive arched buildings of brick, the remains

* Montfaucon Diarium.

† Piranesi, Ant. di Rom. Tom. III tav. 9.

‡ See Winkelmann, Hist de l'Art, Livre vi. chap. v.

of the palace of the Cæsars. Ceilings ornamented with painting, and relief in stucco, were found in the ruins,* but these ceilings have perished. From this situation, the spectator overlooks the valley between the Palatine and Cœlian hills, in which the circus Maximus was situated, and commands a view of the great brick ruins of the baths of Antoninus Caracalla, on the Cœlian hill. The name Palatium arose from the mansion of the Cæsars being situated on the Palatine hill, and the word palace was afterwards used to signify any great mansion.

The Palatine hill is now chiefly occupied by market gardens. In one of these are the baths of Livia, which are of small extent, and consist of subterraneous vaulted chambers of brick.

The *Circus Maximus*, in the valley beneath, was 2329 feet, or less than half a mile, in length. The seats placed around were capable of accommodating 150,000 spectators† to view the chariot races, and other exhibitions. The obelisk of the place of Saint John Lateran, and that of the Piazza del Popolo, were found in the circus Maximus. Scarcely any vestiges remain of the buildings that formed the circus.

At the foot of the Palatine hill, towards the Cam-

* See the figures in Cameron's Ancient Baths.

† Dion. Halic. According to Pliny, 260,000. According to Publius Victor, 380,000.

po Vaccino, was the lupercal, a cave, so called from the wolf of Romulus and Remus, and consecrated to the Lycean Pan.*

Theatre of Marcellus.

The theatre of Marcellus was built by Augustus, and dedicated by him to his nephew Marcellus. The remains of this building consist of a semicircular wall, ornamented with two orders of architecture, one above the other.

In the middle ages it was used as a fortress by the Savelli family, and afterwards a palace of the Massimi family was erected on it, by the architect Baldassar Peruzzi. It is now the mansion of the Orsini family. In the court are two sarcophagi with bas reliefs, and over the door of the hall is one of the beautiful reliefs taken from the arch of M. Aurelius, which stood in the Corso.

An arch with Corinthian columns, not far from the theatre, is part of *the Portico of Octavia*, built by Augustus, and restored by Septimius Severus and Caracalla, as appears from the inscription. This portico was built for the use of the people who frequented the theatre. It is of brick, and was anciently incrusted with thin slabs of marble. Some of

* Virgil. Æneid Lib. viii.

the marble still remains.* The vicinity of the portico is occupied as a fish-market, which cannot be mentioned as a model of cleanliness, and the place near the theatre is called the Piazza Montanara, from the number of country people from the mountains who frequent it. This part of the city is poor, and even exceeds in filth the other parts of Rome.

Monte Cavallo.

The large palace on the Quirinal hill, now the usual residence of the pope, was begun, by Gregory XIII., about 1574, and was continued, at different times, under the direction of various architects, Fontana, Maderno, Bernini, and others. Bonaparte had apartments fitted up in this palace, for his reception, when he chose to visit Rome, which he styled the second city in the French empire; Amsterdam was the third. Adjoining to the palace is an extensive garden.

The Quirinal hill is called also Monte Cavallo, from the two celebrated colossal statues of Castor and Pollux, placed on the piazza near the Quirinal palace. Each of these figures is eighteen English feet in height, and is represented holding a horse

* The marble incrustation is mentioned by Ovid

Aut ubi muneribus nati (*the theatre of M*[illegible]) [illegible]

Addidit, externo marmore dives opus

by the bridle. They are of a shistose marble. A plaster cast of one of these colossal human figures has been for some time exhibited in London. Between the two groups is erected an obelisk, and a large basin, of one piece of granite, is now (in March 1818) placing before the obelisk. In digging the foundation for the pedestal of this basin, the workmen penetrated through the friable pozzolana, and came to the solid piperino rock.

The pedestals are inscribed with the words Opus Phidiæ and Opus Praxitelis. These inscriptions being in Latin, were made after the statues had been brought from Greece to Rome, and therefore are no authentic proof of the statues being the workmanship of these artists.

In the thirteenth century, most of the antique statues in Rome that had escaped the destructive action of time and neglect, lay buried amongst the ruins. Amongst the few that were then to be seen were these two colossal groups on Monte Cavallo. They are described in an account of Rome, written about 1191, and published by Montfaucon,* in which account the author relates that they are the statues of two giants, who liberated Rome from a siege; a like fabulous story he gives of the equestrian statue of Marcus Aurelius. At

* Montfaucon Diarium Italicum

that period of the middle ages, the authentic records of history were forgotten, and fable supplied their place; Virgil was represented as a great magician, who being put in gaol in Rome, conveyed himself and his fellow prisoners away to Naples in a boat, sailing through the air. Poggio, in 1430, speaks of only five or six statues, in which number these two colossal groups are the most remarkable.*

The *Amphitheatrum Castrense* is a fabric of no great magnitude, forming part of the wall of Rome, and situated near the basilic church of Santa Croce and the gate of Saint John. The Coliseum and the amphitheatre of Verona shew what the ancient amphitheatres were, and this building is too small to be ranked in the same class with them. The circular wall that remains of this building is entirely of brick. It is ornamented with Corinthian columns, the shafts of which are built of bricks, forming sextants, or other segments of a circle. The capitals are also of brick.

Near the Porta Maggiore, in a market garden, is the fabric supposed to be the temple of *Minerva Medica.* It is of brick, of a decagonal form, with a large semicircular niche on each of the sides. The roof, a vault of brick, composed of a rib, or costata, springing from each angle, is ruinous, and seems nearly falling. Several statues have been found in this

* Poggius de varietate Fortunæ.

building, and amongst them, one of Minerva, from which, and from Publius Victor's ancient list of the buildings of Rome, this fabric is supposed to be a temple of Minerva. The diameter is 72 feet, the height 94 feet.

A large open place, called the *Piazza Navona*, was anciently the *Circus Agonalis*, formed by Alexander Severus near his baths. In the middle ages, it was called Inagone, then Nagone, and latterly Navona. It retains the oblong form of the circus, the houses being built where the seats were. The largest of the fountains in this piazza is decorated with an Egyptian obelisk, and statues after the models of Bernini. A smaller sized model of this fountain by Bernini is in the gardens at Blenheim. A market is held in this place, and on the Saturdays and Sundays of the month of August the Piazza Navona is laid under water, and the people pass through it on foot and in carriages to enjoy the coolness of the water. The filth must be removed before the water is laid on, and after it is taken off; if this is neglected, the air next day is infected with putrid exhalations. *

Near the Piazza Navona, at the point formed by the Braschi palace, is the mutilated and disfigured statue called Pasquino. It is supposed to represent Menelaus supporting the dead body of Patroclus.

* Lancisi de cœli Rom. qualit.

In the time of Leo X., a satirical tailor, called Pasquino, kept his shop near the place where the statue now stands. Pasquino and his men were the daily collectors and distributors of the scandalous history of the pope and cardinals. After the death of Pasquino, the statue, which lay half buried, and served as a stepping-stone in the muddy way, was erected, and called by his name. In the sixteenth century it was the place in which satirical writings were posted, and which are therefore called pasquinades; they were feigned to be written by the spirit of the deceased Pasquino. Lampoons were still posted at Pasquino in Evelyn's time in 1645.

The statue, now in the capitol, representing the Rhine, and called Marforio, from having been in the forum near the temple of Mars, shared with Pasquino the office of promulgating satirical productions. The answers to the satires of Pasquino were stuck up at Marforio.

Museum of the Vatican.

The Museum of the Vatican had its commencement in the sixteenth century, by Cardinal Marcello Cervini's collection of statues and medals, and other antiquities, which were deposited in the Vatican palace. It is called the Museo *Pio-Clementino*, from the names of the popes Clement XIV. Ganganelli, and Pius VI. Braschi, to whom, and especially to

Pius VI., the great augmentation of the collection in latter times is due. Pius VI. began his reign in 1775. The splendid book, entitled Museo Pio-Clementino, contains engravings of the statues in the Vatican, accompanied with their history and description, by the learned antiquary Visconti, who was called from Rome, and established at Paris by Bonaparte, and died lately in Paris, (1818.)

The entrance to the Museum of the Vatican is through a long gallery, called the *Corridore delle lapidi*, the walls being covered with ancient inscriptions, which are arranged under different classes; the epitaphs of primitive Christians form a numerous class. The following part of the gallery is adorned with antique statues, and some rooms follow, in which the celebrated torso of Hercules, and the piperino sarcophagus of Scipio,* with the inscription, are to be remarked. The torso of the

* The vaults in which this sarcophagus was found in 1780 are to be seen near the Porta S. Sebastiano, as already mentioned. L. Cornelius Scipio Barbatus died 298 years before Christ, about thirty years before the inscription of Duilius in the Capitol. The inscription on the sarcophagus is in old Latin. "*Cornelius Lucius Scipio Barbatus Cnaivod* (that is Cnaeio) *patre prognatus fortis vir sapiensq. quojus forma vir inter parisuma* (parissima) *fuit consol censor aidilis quei fuit apud vos taurasia cisauna samnio cepit subicit omne lucanaa obsidesque abdoucit.*'—See Monumenti degli Scipioni pub. dal. C. Tr. Piranesi, 1785, and Lanzi saggio della lingua Etrusca, 1789.

Belvedere was found at Rome, in the Campo di Fiore, and acquired and placed in the Belvedere by Julius II. It bears the name of the statuary in Greek, and from the form of the letters, Visconti judges the work not to be more ancient than the time of Pompey. Michael Angelo and the other artists in the 1500 at Rome studied this fragment. Flaxman has designed a restoration of it, representing Hercules deified, and received into Heaven, after the end of his earthly career on the funeral pile of mount Œta, and attended by Hebe, the goddess of youth.*

After these there is an octagonal open court, with a fountain in the middle; this court is the *Cortile delle Statue*, in which Julius II. placed the celebrated masterpieces, the Apollo, the Laocoon; and Paul III. the Mercury, called erroneously Antinous. Around this court are rooms, one of which contains the most sublime of ancient statues, the *Apollo of the Belvedere*, so called from its being placed in that part of the Vatican palace, called the Belvedere. The right fore-arm and the left hand are restored by Giovanni da Montorsoli, pupil of Michael Angelo. The Apollo was found at Capo d'Anzo, the ancient Antium, in the fifteenth century, and was acquired

* Notice des statues du Musee Napoleon, (*by Visconti*) à Paris, 1803

by Julius II. Visconti considers the marble to be Greek, although differing from the ancient Greek marble which occurs most frequently. Dolomieu held it to be Carrara marble.

Another of the rooms, which surround the octagonal court, contains the Laocoon, one of the three masterpieces of ancient statuary. It was found in 1506, in the reign of Julius II., in the ruins of the palace of Titus, near the baths of Titus. Pliny describes it as in that place, and mentions the names of the three sculptors of Rhodes, whose work it is. Pliny says it is of one piece, but it has been found to consist of five pieces of marble, united so perfectly that the joints are not easily seen. The ancient right arm of Laocoon, and two of the arms of the sons, are lost. The octagonal court and rooms contain a variety of antique statues, sarcophagi; and baths of porphyry, and of red and of grey granite. Two of these bathing vessels of granite are each nine feet in length; Vessels of this kind are seen in different parts of Rome; two large ones of granite receive the water of the two fountains in the place before the *Palazzo Farnese*. In one of the rooms is the statue of Per-

* "Laocoon in Titi imperatoris domo opus omnibus, et picturæ et statuariæ artis præferendum; ex uno lapide eum, et liberos, draconumque mirabiles nexus de concilii sententia fecere summi artifices Agesander, et Polydorus, et Athenodorus Rhodii." Plin. Hist. Nat.

seus holding Medusa's head, and two pancratiastæ, or boxers; these three statues are by Canova, who is director of the museum.

Animals.—From this octagonal court we proceed to a room containing a collection of antique figures of different animals. The stone of which some of these are formed is of the colour of the animal represented. Amongst these are a crocodile of black marble, three feet in length; figures of tygers in grey syenite, containing large light-coloured oblong crystals of felspar; a panther in light-coloured alabaster, inlaid with pieces of black marble, to represent the spots of the skin; a lobster in green serpentine, the green porphyry of mineralogists. Under this head of animals, we may mention the two Egyptian lions of black syenite at the foot of the stair of the Capitol.

Stanza of the Muses.—After this is a gallery paved with antique mosaic, containing the statues of the Muses, found in the villa of Cassius, called la Pianella di Cassio, at Tivoli, and added to the Vatican museum by Pius VI. These muses were at Paris. In this part of the gallery there are also some termini, with the heads of the Greek philosophers, and their sayings written in Greek on the breast of the terminus; these ancient inscriptions are, Know thyself, and the other sayings.

The Rotonda.—This gallery leads to a spacious circular hall, likewise paved with antique mosaic. Some of this mosaic represents figures of Tritons and

Nereids, in black, on a white ground; it was found at Otricoli. In other parts of the pavement are representations of scenic masks, and comedians in coloured mosaic.* This round hall contains many fine statues; and in the middle is a large flat basin of red porphyry, of great size, about twenty feet in diameter. In one of the rooms near this is

Marble Chairs. the perforated chair of antique red marble, the companion of which has not returned from Paris, and remains in the Louvre; it is supposed that this kind of perforated chair was used in the ancient Roman baths. These two chairs were afterwards employed as pontifical chairs in the church of Saint John Lateran.

Great Vestibule.—From the circular hall we pass into the great vestibule, *La Sala a Croce Greca*, in which are two very large and beautiful sarcophagi, or quadrangular urns, of red porphyry sculptured in relief. The one with the figures of men

* There was to be seen at this time at Rome a piece of ancient Roman mosaic, which had formed part of the pavement of an ancient Roman dwelling house, and had been lately dug up in a garden belonging to the Dutchess of Chablais, situated without the *Porta San Giovanni*. The effect and colouring are excellent. The objects, which are of the natural size, are, a common fowl stripped of the feathers, a basket of cray-fish, a small cuttle-fish a bunch of green vegetables something like asparagus, a fish of the dorade species, (sparus,) a bunch of dates.

on horseback in high relief was originally in the sepulchre of Saint Helena, called Torpignatara, without the Porta Maggiore of Rome. Saint Helena was converted to Christianity by her son Constantine.* The urn was afterwards in the cloister of the Lateran. It was much broken, but is restored.† The other, which contained the remains of Constantia the daughter of Constantine, is adorned with arabesque foliage, and figures of boys collecting the grapes and pressing the juice, and was removed from the church of Santa Constanza, situated without the walls of Rome, as before mentioned in page 317; each of them is eight feet long, and four in height. These urns are admirable from their size, and the nature of the stone, which is very difficult to be worked on account of its hardness, but the sculpture is an example of the fallen state of the arts of design in the time of Constantine, a decline which is visible in the medals of Constantine. The surface of the porphyry is brought to a fine polish. A part of the museum is sometimes lighted up to shew the statues by candle-light.

Great Staircase.—We come now to the grand staircase of the Museum. This is the farthest extremity of the Vatican palace, and we return to the

* See Eusebius, Vita Constantin.

† See a view of both these urns in Piranesi, Antichita di Roma.

loggie through a succession of galleries, the first of which contains antique vases made of marble and other stones. There is one of these vases of that compound rock called Verde di Corsica.

Galleria Geografica.—Then comes a long gallery, on the walls of which are painted geographical maps of different districts of Italy on a large scale. They were painted in 1581, by order of Gregory XIII. The painter was Paolo Brighi, and they were executed under the direction of Ignazio Danti the astronomer,* and repaired in the time of Urban VIII., Barberini.

Tapestry.—From the end of this gallery there is an entrance to some rooms containing tapestry woven at Arras in Flanders,† by order of Leo X., after six of the cartoons of Raphael which are at Windsor, and after some other cartoons of that great master. The strong lights are effected in these pieces of tapestry by gold thread.

Stanze of Raphael.—Next come the four rooms, the *Stanze* of Raphael, the walls and ceilings of which are painted mostly in fresco, some in oil, by Raphael, and by his pupil Julio Romano, after the designs of Raphael. In the Sala di Constantino, which is decorated with the actions of that emperor, is the large

* See page 160.

† Vasari, Vite de' Pittori.

picture of the Victory of Constantine over Maxentius at the Ponte Molle. Between the windows is the Donation of Rome by Constantine to Saint Silvester: the emperor presents a golden image of the goddess Roma to the bishop of Rome, a fine and pleasing picture. This donation, which, according to the best historians, never really took place, has been held out by the popes as the foundation of their temporal power in Rome. The Liberation of Saint Peter from Prison is over one of the windows of another room. The Conference of the Fathers of the Church concerning the Sacrament occupies a side of one of the rooms. In the picture called the School of Athens, Raphael has introduced a portrait of himself, and of his master Pietro Perugino, the portraits of the architect Bramante as Archimedes; that of Balthassar Castiglione,* and others. There are many other pic-

* Balthassar Castiglione was born at Mantua in 1468, and died in 1529, at the age of 61. He was for some time in the service of the Duke of Urbino, and was ambassador from that duke at the court of Henry VII. King of England. He was afterwards employed by Frederic Gonzago, Marquis of Mantua, and by the pope, in embassies at different courts of Europe. His work, Il Cortigiano, containing rules of conduct for a courtier, was in much estimation, and has gone through many editions. The style is held to be classical. He was the friend of Raphael, and brought Julio Romano to Mantua, where the fresco paintings of that artist are still admired, as we have mentioned in speaking of that city. A monument,

tures, the whole of the walls and ceilings being covered with painting, which is mostly in fresco. The pavement of some of the *Stanze* is inlaid with red porphyry and green, in spiral foliage, like that of the Lateran, and some other old churches in Rome and Florence, and contains the name of Julius II., by whose order Raphael painted these rooms. The portrait of Julius II. is also introduced into several of the pictures.

The Loggia of Raphael.—From the stanze we go out into the *loggie*, or corridors, which are open on one side with arcades, and go round three sides of a quadrangular court. One of these corridors is celebrated as having been painted in fresco after the designs of Raphael, and under his direction, by Giovanni da Udine. On the ceiling, which corresponds to each of the arches, there are four pictures representing subjects from the Old Testament. The series of the Old Testament is complete, and there are a few from the commencement of the New. Some of these pictures are executed by Raphael himself; many of them are in good preservation, the colours having retained their original brilliancy. The Creation of Eve and the Finding of Moses are very pleasing. The piers and walls of this loggia are painted with

designed by Julio Romano, was erected to the memory of Castiglione in the church of the Madonna delle Grazie, some miles from Mantua. Tiraboschi, Stor. del. let. It.

foliage, flowers, and fruit, disposed in a style which Raphael borrowed from the paintings on the stucco of the baths of Titus. The ceilings are painted with architectural designs in very correct perspective. In some places the sky is represented with swallows, distant flights of cranes, and other birds. Stucco medallions in bas relief, by Giovanni da Udine, are introduced amongst the painted ornaments.

The rest of the loggie that surround the court are painted after the designs of other artists.

Picture Gallery.—From the loggie we enter a suit of rooms in which some valuable pictures are kept. The famous picture of the Transfiguration—the Virgin with the portrait of the donor—the small uncoloured figures of the theological virtues, Faith, Hope, and Charity,—all by Raphael.

The Communion of Saint Jerome, by Domenichino, one of the greatest productions of the art, and ranked near to Raphael's Transfiguration.

The Burial of Christ, by Caravaggio.

Fortune, by Guido; and other pictures.

All the above mentioned pictures of Raphael, of Domenichino, and Caravaggio are returned, after having adorned the gallery of the Louvre during the years of Bonaparte's reign.

Garden of the Vatican.

The extensive garden of the Vatican palace occu-

pies a rising ground; and, from the fine view over Rome to the Apennines, both the garden and the palace had the name of Belvedere. The garden is laid out with broad walks between hedges of box and of bay, (Laurus nobilis,) twelve feet in height. There are two ornamental summer-houses.

Pedestal of the Column of Antoninus.—In this garden is seen the marble pedestal of a granite column that was erected in honour of Antoninus Pius. The column was forty-nine feet in length, but, having been injured by a fire, it was cut into pieces to repair the obelisk of Monte Citorio. The pedestal is a great block of marble, nine feet square and six feet high. On one side of the pedestal is sculptured the apotheosis of Antoninus Pius and Faustina senior, his consort, in high relief.

Bronze Pine Cone.—In front of that part of the palace of the Vatican which surrounds the flower parterre, is placed the great bronze cone, made in the form of the cone of the Pinus pinea, which is supposed to have been placed on the summit of the Moles Adriani.* On each side of the cone is an antique bronze peacock.

Capitoline Hill.

Of the temples and magnificent buildings that

* Winkelmann, Hist. de l'Art.

adorned the ancient capitol scarcely a vestige remains.

The modern capitol consists of three buildings, occupying three sides of a quadrangle. On the fourth side is a ballustrade, and the inclined surface or scala cordonata, which leads from the foot of the hill. External stairs of this kind are frequently employed in Italy. They admit of the passage of beasts of burden. The edges of the steps are semicylindrical bars of stone, and only two or three inches high. The upper surface of the step is an inclined plane formed either of pavement stones or bricks. These three buildings were erected about 1540, by Paul III. Farnese, after a design of Bonaroti.

Egyptian Lions.—At the foot of the stair are two Egyptian lions of syenite, dark coloured, with some veins of red. This stone is different from the syenite of the obelisks, and resembles the stone of the colossal head lately brought from Egypt, and placed in the British Museum.

Sculptures on the Ballustrade.—On the ballustrade, at the top of the ascent, are statues of Castor and Pollux, each with a horse; two antique trophies which were formerly placed under two arches on each side of a large niche or tribuna, at a castellum of the Aqua Marcia near the arch of Gallienus. They are figured in their ancient situation in

Donati.* On the ballustrade of the capitol is likewise an ancient mile-stone with the number I., and some other sculptures.

Equestrian Statue.—In the middle of the square formed by the three buildings is the celebrated bronze equestrian statue of Marcus Aurelius, which Michel Agnolo admired for its animated expression.

Palace of the Senator.—Of the three buildings, that in the middle, called the Palace of the Senator, contains a great hall, where courts of justice are held, and a prison. The senate of ancient Rome continued under the emperors long after its power was gone, but in course of time even the nominal senate ceased to exist.

Rome was taken five times during sixteen years, from 536 to 552, in the reign of Justinian; twice by Belisarius, twice by Totila the Gothic king of Italy, and once by Narses, Justinian's general. By these sieges the senators of Rome were dispersed, the senate ceased to exist, and never again assembled as a council.

In 1144, the inhabitants of Rome revived a semblance of the senate. In 1278, Nicholas III. claimed the temporal sovereignty of Rome, founding his claim on the alleged donation of Constantine to the bishop of Rome, and established the annual election of the senator of Rome.† The senator, whose duty

* Donatus de Urbe Roma. Lib III. cap. xi

† See Statutæ almæ urbis Romæ auctoritate S D. N. Gre-

is confined to the administration of justice, must be an alien, and of a place at least forty miles from Rome. In 1818, Prince Corsini, a Florentine, was elected senator.

From the belfry of the senator's palace is a good view of Rome.

Museum of Sculptures.—The building to the right of the senator's palace contains the Capitoline museum, consisting of a noble collection of statues which was begun by Clement XII. Corsini, about the year 1735; it is the second collection in Rome after the museum of the Vatican.

Ground Floor.—On the ground floor, in a court, is the recumbent statue of the river Rhine, called Marforio, formerly placed at the ascent to the Capitol, near the arch of Septimius Severus, and at that time celebrated for the lampoons that used to be posted near it, in answer to those posted at Pasquino.

Urn.—Another remarkable object is a celebrated marble urn, with parallel sides, and two recumbent statues on the top, of the size of life, and with histories in relief on the front, and less finished histories on the other side. This urn was found, as Flaminio Vacca, the sculptor, relates,*

gorii XIII Pont. Max a Senatu Populoque Rom. reformatæ et editæ. Rom. 1580. These statutes form part of the modern law of the city.

* See the notes of Flaminio Vacca on the different antiqui-

in the vault of a considerable ancient sepulchre, the ruins covering which formed a mount called Monte di Grano, between Capo di Bove and the Frascati road, near Rome.* The urn was called the urn of Alexander Severus and his mother, Julia Mamea, from some resemblance to the heads on the medals of that emperor; but Winkelmann dissents from this opinion, and considers that the two recumbent figures on the top represent a husband and wife. The histories sculptured in relief on the sides have received different explanations. According to description by Venuti in the Museum Capitolinum, the front is Breseis, Achilles, and Agamemnon, the other of the long sides Achilles and Priam. Within this marble urn was found the singular

Portland Vase.

and beautifully sculptured vase acquired by the Dutchess of Portland from the Barberini family, and now in the British Museum; it is of a dark coloured glass, which was coated exteriorly with opaque white glass; the exterior coat of white glass was sculptured so as to leave the figures in relief white, and the ground is the dark coloured glass of the vase. The history represented by the figures on the vase has received

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ties found at Rome in his time, about 1580, published in Montfaucon, Diar. Italic.

* See drawings of the urn and the sepulchre in J. B. Piranesi, Antich. di Roma, and Bartoli, Sepolchri Antichi, Tav. 85.

various explanations; according to Winkelmann, it is the story of Thetis transformed into a serpent to avoid the pursuit of Peleus.* Darwin conjectures it to be a representation of the passage of the soul into the Elysian fields.† This vase was skilfully imitated in fine earthenware and porcelain by Wedgewood.

On the ground floor is also a room containing Egyptian idols, many of them in basalt, from the Egyptian temple in the Villa Adriana near Tivoli.

Ancient Plan of Rome.—The walls of the staircase leading to the principal floor are covered with the fragments of an ancient plan of Rome, engraved on white marble, on a very large scale. This plan anciently formed a pavement which was broken when the empire and every thing in the city went to ruin, and the pieces, disjointed and confused, were employed to incrust the wall of the church of Santi Cosmo e Damiano, formerly the temple of Remus. From some letters of an inscription on one of the fragments, it is supposed to have been engraved in the time of Septimius Severus. In the reign of Paul III. Farnese, about 1540, the fragments were collected and placed by that pope in the Farnese palace. An engraving and description of the disjointed and imperfect fragments of this ancient plan,

* Winkelmann, Hist. de l'Art. Liv. vi. chap. viii. de l'Art depuis Septime Severe jusquà son dernier sort à Rome.

† See the Botanic Garden, a poem, by Erasmus Darwin.

leaving out the pieces that represent only private buildings, is published by Bellori.* So many are lost that the remaining fragments of this plan do not join, and, therefore, are not sufficient to give the idea of the whole extent of the city. Of the names there are only a few words that are entire, as ludus magnus, theatrum arcelli, theatrum, affixed to the plan of another theatre. Of most of the other names only a few letters remain. A marble fragment of another ancient topographical plan, serving for the distribution of water from the aqueducts, is published by Fabretti. † Frontinus, who was director of the aqueducts in the time of Nerva, mentions, that he introduced the use of plans of the aqueducts for the convenience of the overseers.

Statues.—In this museum is the celebrated statue of Antinous, which was found in the Villa Adriana at Tivoli; Antinous in the Egyptian habit, also found in the Villa Adriana; the celebrated statue called the Dying Gladiator. These three statues were in Paris, and have been returned since the second occupation of that city by the Allies. The Venus of the Capitol, which was also in Paris. A young Hercules in basalt. A laughing Faun in antique red marble. There are some *Mosaics* from

* Fragmenta vestigii veteris Romæ ex lapidibus Farnesianis, cum notis Bellorii, in Græv. Thes. Ant. Rom. Tom. IV.

† Fabretti de Aquæductibus, Diss. III. in Græv. Thes. Ant. Rom. Tom. IV.

a pavement in the Villa Adriana, one representing doves perched on the edge of a cup ; this Mosaic was once in the possession of Cardinal Furietti, who published a description of it.

Busts.—One of the rooms contains a collection of antique busts of philosophers, poets, orators, and other eminent men. In another room are busts of emperors and persons of the imperial family, arranged chronologically. With respect to some of these busts it is doubtful whether they are really portraits of the persons whose names have been affixed to them by the moderns. The authenticity of an antique portrait can only be ascertained by the antique name affixed to it, or by the resemblance to the portraits of the individuals on antique medals which have the name affixed. Cardinal Alexander Albani doubted whether there existed any well authenticated portrait in marble of Julius Cæsar.*

Palace of the Conservators.—The building to the left of the senator's palace is the palace of the conservators. The three conservators have the care of the Capitol, the treasury, and the government of the city and its territory. In the court are the hand and head of a colossal statue of bronze which represented Commodus, a colossal head in marble of Domitian, and some other fragments of colossal statues.

Measures.—In this court of the conservators'

Winkelmann, Hist. de l Art.

palace the modern Roman measures of length, the palm, and others, and some ancient measures, are engraved on marble, executed under the direction of Lucas Pœtus. *

Inscription of Duilius.—On the first landing place of the stair is the very ancient inscription in honour of the naval victory gained by Duilius over the Carthaginians, in the year 261 before Christ. The inscription is in old Latin. Over it is placed a column adorned with the rostra of ships in marble; this column is modern, and has been copied from the figure of the columna rostrata on ancient medals. The inscription is much mutilated; it is given by Grævius. †

Bas Reliefs of M. Aurelius.—In the staircase are some fine large reliefs representing acts of Marcus Aurelius Antoninus, two of which adorned the arch of Marcus Aurelius Antoninus, called l'Arco di Portogallo, from the Cardinal Legate of Portugal, who lived near it. This arch was situated in the Corso, and, having become ruinous, was taken down in 1662. One of the sculptures from this arch represents, as Nardini interprets it, the apotheosis of Faustina. The other is Marcus Aurelius,

* See Pœtus de mens. et ponder.

† Grævii Thes Ant. Rom. Tom. IV. præfat. The explanation and restoration by Ciacconius is in the same volume.

There are some observations on this inscription in Adelung's Mithridates.

or L. Verus, receiving petitions. A view of the arch is published in Donatus. *

The rooms of the conservators contain fresco paintings, of which some by Annibal Carracci; and statues, amongst which are a bronze bust of Michel Agnolo, executed by himself; the antique bronze wolf; and the Boy plucking a thorn from his foot, an ancient bronze statue which is full of life; this statue was in Paris.

Fasti.—In the wall of one of the rooms are inserted the fragments, in marble, of the consular fasti to the time of Augustus, found in the Forum Romanum, and in another place are the modern fasti of the senators of Rome.

Picture Gallery.—The collection of pictures formed by Benedict XIV., about 1750, occupies two large rooms of this building. Amongst the pictures are, Bacchus and Ariadne by Guido; Jupiter and Europa by Paul Veronese; and several other pictures by eminent masters.

Tarpeian Rock.—The precipitous side of the Capitoline hill, behind the palace of the conservators, is the Tarpeian rock, from which condemned criminals were anciently thrown. Its height, which has been diminished by the falling down of the earth,

* Donatus de Urbe Roma, Lib. III. cap. xvi.; Roma Antica di Famiano Nardini; Museum Capitolinum, Rom. 1750, 1775, Vol I.

is now fifty feet. Tacitus mentions that the ascent to it was by a stair of 100 steps. In the tables of heights measured by Sir George Shuckburgh, the height of the Capitoline hill above the valley is stated to be 150 English feet.

By the side of the stair to the Capitol is that which forms the ascent to the church of Araceli, consisting of 122 steps. On the Capitoline hill there are the remains of ancient walls of Piperino, which some have supposed to be part of the fortress that resisted the attack of the Gauls who destroyed the rest of the city, in the year 387 before Christ. At the foot of the Capitoline hill, towards the Campus Martius, is the ancient sepulchre of C. Bibulus.

ROME.—*Sect. III. Palaces and Villas.—Farnese Palace. Annibal Caracci's Paintings.—Farnesina. Raphael's Cupid and Psyche.—Rospigliosi Palace. Guido's Aurora.—Colonna Palace. Beatrice Cenci. Antique Entablature.—Borghese Palace. The Sybil of Domenichino. Porphyry Urn.—Justiniani Palace. Statues.—Corsini Palace. Pictures.—Cancellaria.—Palazzo Madama.—Doria Palace. Landscapes.—Chigi Palace.—Barberini Palace. Charles IV. of Spain.—Braschi Palace.—Stoppani Palace, designed by Raphael.—Spada Palace. Stuccoes. Pictures.—Vigna di Papa Julio. Church of Saint Andrew, by Vignola.—Madonna de' Candelabri.—Cardinal Fesch.—Costaguti Palace. Ceilings by Domenichino.—Mattei Palace. Fontana delle Tartarughe.—Lanti Palace. Satirical Picture.—Massimi Palace. Baldassar Peruzzi the Architect. Discobulus. First Printing Establishment in Rome.*

Villa Borghese.—Villa Pamfili.—Villa Albani. Winkelmann.—Villa Ludovisi.—Villa Mattei. Godoy.—Monte Mario. Villa Madama.

Albano.—Lake of Albano.—Castel Gandolfo.—Frascati. Villa Aldobrandini. La Rufinella.

Tivoli. Aqueducts. Banditti. Tomb of Plautius. Calcareous Deposit. Travertine Stone. Medallions. Cascade at Tivoli. Iron Forges and other Machines. Ancient Aqueducts. Ancient Temple. Villa d' Este. Villa of Mæcenas. Adrian's Villa.

Aqueducts of Rome. Bridges. Landing Quays. Walls of the City. Population.

The *Farnese Palace*, the finest in Rome, both on account of its size and of its architecture, was begun by Paul III., Farnese, whilst he was yet cardinal, about 1530, after the design of the architect Antonio da Sangallo, and finished by his nephew, Cardinal Alexander Farnese, under the direction of Bonaroti and Giacomo della Porta. *

The Travertine stone of which it is built was obtained by the demolition of a part of the external wall of the Coliseum, and from the Theatre of Marcellus.

This palace, as well as the other possessions of the Farnese family, now belongs to the king of Naples, and is the residence of his ambassador at Rome; it is neglected, and almost dismantled.

* A view of the Farnese Palace is published in Grævii Thes. Antiq. Romanorum, Tom. VI.

The palace is quadrangular, and the walls are quite detached from other buildings. Opposite to the principal front is a large open place with two fountains, with ancient granite bathing vessels. In the middle of that front which is towards the river, the upper story is occupied by a loggia, or portico of three arches, by Vignola. The court is an exact square, and is decorated with three orders of architecture, one above the other. The two lowest, Doric and Ionic, support arcades, forming porticoes all round. The third is composed of Corinthian pilasters, with windows between. In this court were formerly placed the Farnese Hercules, and the Farnese Flora; and in the court behind the palace was the group of Dirce, called the Farnese Bull, all which were removed to Naples during the eighteenth century. The only piece of ancient sculpture that remains in the court is the large urn of white marble, with carved fluting, found in the tomb of Caecilia Metella.

Annibal Caracci's Fresco Paintings.—In the apartment on the first floor are the celebrated fresco paintings on the ceiling, painted by Annibal Caracci, with the assistance of his pupils. That on the flat part of the ceiling represents the Triumph of Bacchus and Ariadne. On the curved sides of the ceiling are, Galatea on the Sea, surrounded by Tritons, Nymphs, and Cupids; Cephalus and Aurora; Polyphemus and Galatea; Poly-

phemus throwing the Rock at Acis; Jupiter and Juno; Diana and Edimion; Hercules and Jole; Venus and Anchises; Apollo and Hyacinthus; Ganymede and the Eagle. There are some other smaller frescos. The walls are painted with Andromeda chained to the Rock, and Perseus with the Head of Medusa. The fresco pictures on the ceiling are admirable for their execution, and the brilliancy of their colours, which have resisted the effects of time, and remain uninjured after the lapse of 220 years.

These, and the fresco paintings by Raphael at the Farnesina, are the finest in Rome. Raphael's Loggie of the Vatican are not so well preserved. The frescos of Domenichino in Sant Andrea della Valle, San Carlo ai Catinari, and Saint Gregory come next in rank.

One of the rooms is painted by Zuccari and Vasari with subjects relating to the hostility of Paul III. Farnese against the Protestants. This Pope excommunicated Henry VIII. of England in 1546.

In another room are more fresco pictures by Annibal Caracci. In the great saloon is an antique equestrian statue, smaller than life.

The *Farnesina*, or small Farnese Palace, is on the opposite side of the river. It was built after the design of Baldassar Peruzzi, by Agostino Chigi, an eminent banker in the time of Leo X., and afterwards was purchased by the Farnese family. It is inhabited by the Neapolitan consul.

Paintings of Cupid and Psyche.—On the ceiling of the hall of entrance are the beautiful fresco pictures of the story of Cupid and Psyche, after the design, and painted under the inspection of Raphael. The two large pictures on the flat part of the ceiling represent Venus and Cupid pleading their cause before the Assembly of the Gods, and the Marriage of Cupid and Psyche in presence of the Deities. The ten pictures on the sides of the ceiling represent different parts of the same story, as related in the tale which Apuleius, a writer of the time of Antoninus Pius, has introduced in his metamorphosis, as told by the old woman in the den of robbers. These histories here designed by Raphael have not the advantage of explaining themselves, a defect which arises from the story of Cupid and Psyche being a kind of fairy tale.

In another room is a fresco painting of Galatea upon a Shell drawn by Dolphins, by the hand of Raphael himself. In this room is a colossal head, drawn with charcoal by Bonaroti, when he came to visit Daniel da Volterra, who was employed in painting the apartments of this palace. The garden of the Farnesina extends along the banks of the river.

Farnese Garden.—The Farnese garden on the Palatine hill is now stripped of its ornaments and neglected. The gate is by Vignola.

In the *Rospigliosi Palace*, on the ceiling of a sa-

loon of the Casino in the garden, is the Aurora painted by Guido. The exterior of the Casino is richly decorated with antique sculptures in relief incrusted in the wall. In the palace are many other fine pictures.

Portrait of the Cenci.—A masterpiece which is admired in the great collection of pictures in the *Palazzo Colonna* is a most beautiful and interesting head, the portrait of Beatrice Cenci, by Guido, apparently only fifteen, although the manuscript account says she was twenty-two. This young lady was beheaded on the place at the bridge of Saint Angelo, on the accusation of having conspired to murder her father. The father was a monster of vice, addicted to disordinate lust, had attempted to violate the chastity of his daughter, and treated all the members of his family with tyrannical cruelty. He passed from this life in a rocca or castle in the country, where he had retired from Rome with his family for the summer. A considerable time after his death, the stepmother, the daughter Beatrice, and two of the sons, were accused of having murdered him, and were thrown into prison. By means of the torture, the stepmother and the sons were brought to confess themselves guilty. Beatrice underwent the torture without confessing; but at last, at the entreaty of her brothers, she made an imperfect avowal. The proofs were inadequate, and it has been said, that the con-

fiscation of the property of the Cenci family, which was considerable, was a motive that induced the Pope, Paul V. Borghese, to procure the condemnation of the Cenci. The villa Pinciana, which is now the villa Borghese, belonged to the Cenci family. The portrait of Beatrice was painted by Guido after her condemnation. She underwent the execution with great firmness. In the edition of Lavater's Physiognomy, published at the Hague, there are several vague and unimportant remarks on the portrait of Beatrice Cenci.

In one of the apartments of this palace is admired a spacious gallery, ornamented with marble pilasters. Amongst other pictures there are two called Melpomene and Thalia, by Salviati; these two figures are copied from Michael Angelo's statues of Night and Aurora, in the Capella de' Depositi of San Lorenzo at Florence.

Ancient Entablature.—In the garden of the Colonna Palace, which occupies the face of the hill, there are pieces of a very large entablature of marble, supposed by some to have belonged to a temple of the Sun, built by Aurelian. Nardini thinks these entablatures are of better workmanship than what was done in Aurelian's time, and that they were part of the temple Salus, on the Quirinal, of which Livy makes mention. Winkelmann, however, maintains, that they may be of the time of Aurelian, as the buildings erected by that emperor at Palmyra shew that the art of carving architectural ornaments

in the Corinthian style and proportions was still in vigour.

The *Borghese Palace*, a large edifice, the ground plan of which is compared to the form of a harpsichord, was completed about 1615, in the time of Paul V. Borghese. Prince Borghese, to whom this palace belongs, is possessed of large property; he is one of the richest of the Roman princes, and resides at Florence.

Pictures.—This palace contains a numerous collection, and amongst which are several pictures by the great masters, Raphael, Titian, Domenichino, Julio Romano. Of these we shall mention only the celebrated masterpiece, the Sybil, by Domenichino. It is a half-length picture of a beautiful female with auburn hair. Domenichino has repeated this head in some of his other works.

Porphyry Urn.—In this palace is a porphyry sarcophagus found in the mausoleum of Adrian, now the Castle of Saint Angelo.

The *Justiniani Palace* is situated between the Pantheon and the Piazza Navona, on the ground where stood the baths of Nero, afterwards called Thermæ Alexandrinæ, from Alexander Severus. Flaminio Vacca, the sculptor, mentions a row of six large marble columns discovered in this place, and afterwards sawed up for various purposes.* This

* See the Notes of Flaminio Vacca in Montfaucon, Diarium Italicum.

palace was finished in the seventeenth century, by the architect Boromini, and is loaded with ornament in the degenerate manner of that time. The collection of statues is one of the largest private collections in Rome. The court also is adorned with numerous reliefs and statues. Amongst them is an ancient mile stone, with the number VII., like that on the balustrade of the Capitol. There is likewise a valuable collection of pictures.

The *Corsini Palace*, situated in the long street of the Transtevere, called the Lungara, is a large edifice in which Cristina Queen of Sweden resided and died in 1689. It was purchased and enlarged by the Corsini family about 1735, in the time of Clement XII. Corsini. The Corsini is a Florentine family. The gallery of pictures in their palace at Florence we have mentioned in speaking of that city.*

Pictures.—The collection of pictures is very considerable; amongst them is a portrait of Julius II. by Raphael, like that in the tribune of the gallery at Florence; Philip II. by Titian; Paul III. Farnese, whilst cardinal, by Titian; two Sons of Charles V. by the same; a Holy Family, and a picture of the Annunciation, both by Bonaroti; Herodias with the head of John the Baptist, a celebrated picture by Guido; Innocent X. by Velasquez; Velasquez was a native of Seville, and died in 1660.

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* See page 193.

The library contains many books printed in the fifteenth century, and 400 volumes of prints.

View.—The garden occupies the declivity of the Janiculine hill, and from a casino in the upper part of the garden there is a fine view of the city. A large engraving of Rome seen from this point, was published by Vasi. The view is like that from San Pietro Montorio, which is not far distant. *

The *Palace of the Cancellaria* was built of the travertine from the Coliseum by Bramante.

The *Palazzo Madama*, so called from having been the residence of Madama Caterina de' Medici, niece of Leo X. and afterwards Queen of France, is situated between the Piazza Navona and the Pantheon. It is now the residence of the governor of Rome, and in this building is the office in which foreigners must deposit their passports during their residence in Rome.

The *Doria Pamfili Palace* in the Corso is a large edifice loaded with ornament, in the degenerate style of the seventeenth century, partly after the design of Boromini.

The collection of pictures is extensive, and contains many works of the most eminent masters. There are a great number of landscapes by Gaspar

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* See page 323.

Dughet, commonly called Gaspar Poussin; * and landscapes by Rosa di Tivoli. †

The *Chigi Palace*, forming the angle of the Piazza Colonna and the Corso, was built about 1670, for the nephews of Alexander VII. Chigi. Part of the architecture is by Carlo Maderno. It contains a large collection of pictures and some statues, likewise a considerable library.

The *Barberini Palace.*—Urban VIII. Barberini, during a long reign of twenty-one years, from 1623 to 1644, was much ruled by his nephews, who made a bad use of their power. A proof of the riches they acquired is the Barberini palace, one of the largest palaces in Rome, which was built about the year 1630, by the nephews of Urban VIII. It was begun by the architect Maderno, continued by Boromini, and finished by Bernini.

King of Spain.—It is now (1818) the residence of Carlo IV. the abdicated King of Spain. This old king appeared very fervent in his devotions at the pope's chapel in Easter of 1818. He was travelled about by Bonaparte from Spain to Fontainebleau, and then to Compiegne, and at last was allowed to reside in Rome; he died at Rome in 1819. The prime

* Gaspar Dughet, called Gaspar Poussin, was born at Rome in 1613.

† Philip Roos, commonly called Rosa di Tivoli, was born at Frankfort on the Main in 1655.

minister and creature of the king and queen, Godoy, the Prince of Peace, died also at Rome soon after, possessed, it is said, of property amounting to ten millions Sterling, placed in the public funds of different nations of Europe.

The *Braschi Palace*, situated at the Piazza di Pasquino, is a large and handsome modern building constructed near the end of the eighteenth century, by the relations of Pius VI. Braschi, who reigned from 1775 to 1800. The staircase is grand, and is adorned with beautiful large polished columns of red Egyptian granite. There is an unfinished gallery containing several ancient marbles.

Near the church of Sant Andrea della Valle is the *Palazzo Stoppani*, formerly Caffarelli, built after the design of Raphael. The front has been lately repaired, and consists of a ground floor with rustic arches. The principal floor, ornamented with Doric columns, and an attic story with pilasters.

The *Palazzo Spada* is situated near the Farnese palace, and was built about 1540, in the time of Paul III. Farnese. The architecture is by Giulio Mazzoni, a native of Placentia, pupil of Daniel da Volterra. The front to the street and the walls of the court are covered with a great number of sculptures in stucco. There is a fine staircase ascending in one line without turnings. Amongst many fine paintings is Paris embarking with Helen by Guido; Cleopatra by the same master; a portrait of Paul

III. Farnese by Titian. There is also a collection of statues.

The palace of Pope Julius III., the *Vigna di Papa Julio*, without the Porta del Popolo, is admired for its architecture, which is by Vignola. It is now occupied as a farm house and quite neglected. Farther on, on the same road, is the small polygonal church of Saint Andrew by the same architect.

Madonna de' Candelabri.—In the palace of Lucian Bonaparte, together with many other fine pictures, is the Madonna de' Candelabri by Raphael, formerly in the Borghese collection; it is a round picture of the same form as Raphael's Madonna della Seggiola.

Cardinal Fesch also, the maternal uncle of Bonaparte, possesses a valuable collection of pictures in his palace.

In the *Costaguti Palace* is a picture on the ceiling by Domenichino, of which the subject is Time unveiling Truth. There is another ceiling by Albano, and one by Guercino.

In the court of the *Mattei Palace* are many antique sculptures in relief, and in the apartments pictures and statues, some of which were lately sold and carried to Paris.

Fountain.—In the piazza near the Mattei palace is the fountain of the *Tartarughe* or Tortoises, a pleasing design of Giacomo della Porta.

Satirical Picture.—In the Palazzo *Lanti* is a

large satirical picture by Zuccari, in which is represented the Pope, Paul III. Farnese, with asses' ears, and accompanied by emblematical figures of hatred and lust, coveting the wife of Zuccari, and stretching forth his arm to persecute Zuccari, who is leading away his wife. The wife is represented naked. This picture is kept veiled.

Massimi Palace.—The Massimi family is one of the old families of the middle ages. * The Massimi palace is remarkable for its architectural decorations, and the convenient disposition of the apartments, though it occupies but a small space of ground. The principal front is curved, so as to suit the angle formed by the street, and the ground floor is a portico supported by six Doric columns. Baldassar Peruzzi of Siena was the architect. † In this palace are several pictures, and a celebrated antique statue of a Discobulus, of large grained marble, and quite entire.

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* See Storia de' cinque antiche Famiglie di Roma cioè de' Frangipani, de' Savelli, de' Massimi, de' Cenci, e de' Mattei, by Onofrio Panvinio

† Baldassar Peruzzi was born in 1475, and died in 1550. He was celebrated as a painter and architect, and for his skill in perspective. He was employed as architect at Saint Peter's before Michael Angelo had the charge of the building, and the design he proposed for rebuilding Saint Peter's is published in the Architettura di Serlio. An account of Baldassar is published in Le Vite de' piu eccellenti pittori, scultori et architetti di Giorgio Vasari Firenze, 1540.

Printing.—In an adjoining house, which belongs also to the Massimi family, was the first establishment for printing books in Rome, by the German printers Sweynheim and Panartz, in 1470.

Augustin de Civitate Dei was printed in the house of the Massimi in 1470, and a Bible in 1471, as the following verses at the end of the book testify:

> Conradus Sweynhem, Arnoldus Pannartsque magistri
> Romæ impresserunt talia multa simul.
> Petrus cum fratre Francisco Maximus Ambo
> Huic operi optatam contribuere domum MCDLXXI.

Villas.

Villa signifies at Rome a pleasure garden, considerable for extent and magnificence. The Casino is the principal house built in this pleasure ground. The name Vigna is given to a garden, or small farm, which is partly, or altogether cultivated for supplying the markets.

The villa Borghese, belonging to the prince of that name, situated just without the walls, was formed about 1610, by Cardinal Scipio Borghese, nephew of Paul V. This pope, during a reign of fifteen years, bestowed great riches on his nephews, which their descendants the Borghese family possess at this day. The villa is an extensive piece of ground, three Roman miles in circuit, part of which is laid out with broad walks between hedges of eight to

twelve feet high. Another part consists of uneven ground interspersed with trees, having something the appearance of an English park. There are several roads for driving in carriages through this extensive villa.

Plants.—The ground is adorned with evergreen oak; Laurus nobilis; Viburnum tinus, now, on the 13th February, in flower; and many large trees of the Pinus pinea. Cactus opuntia, Yucca gloriosa, and Agave Americana, grow in the open air, and the Agave is usually placed in pots to ornament the top of a wall, or the gate posts.

Orange trees ripen their fruit, and, in general, do not suffer by the cold when exposed to the air during winter at Rome; but lemon trees, and some other species of citrus, are apt to lose their leaves, and to have their small branches killed by the cold, and therefore they are kept in pots, and covered in winter by a house made of reeds (Arundo donax) and straw, with apertures which admit the light in the day, and are closed at night by shutters of reeds and straw.

Buildings.—There are several casinos in the villa, and many small ornamental buildings, amongst which are an artificial ruin, representing a temple of Antoninus and Faustina; a temple of Esculapius, surrounded by a piece of water; an imitation of an ancient circus, or hippodrome. There are, in different parts of the ground, statues, ancient in-

scriptions, old sepulchral monuments, and fountains. The conduit of the Acqua vergine, one of the three aqueducts that supply Rome, passes through the villa.

The principal casino is a handsome building, and formerly contained the Borghese collection of statues, which was sold to France, and is now in the Louvre.

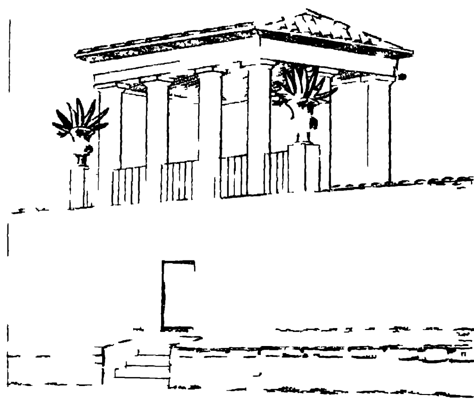
Villa Pamfili.—The villa Pamfili, which rivals the Borghese villa in beauty, and perhaps surpasses it in extent, was formed by Prince Pamfili about 1650, in the time of Innocent X. Pamfili. Part of this extensive pleasure ground is laid out with broad walks and high hedges, in the Italian style, and the rest is like an English park, with large groves of old pines, (Pinus pinea,) some artificial ruins, and ornamental buildings. There is a considerable piece of water. The views are beautiful, and are terminated by the Latian hills, on which the white villas of Frascati are discerned.

Plants.—The Ulex Europeus, whin, or furze, is cultivated as a shrub. There is much of the Anemone pulsatilla, and other anemones, growing native in the pasture, and now, on the 24th February, in flower. In this villa is a pretty large cedar of Lebanon, the diameter of the trunk eighteen inches. This kind of tree is not frequent in Italy.

Casino by Algardi.—The casino is designed by Algardi, and highly ornamented exteriorly with



[illegible] Trees in Wint[illegible] at P[illegible]
[illegible] 43 [illegible] 189 se[illegible] also P 23 and Vol II p 144 [illegible] on the Shutters
[illegible] 434 See also P 216 244 and Vol II p [illegible]



Agave Americana planted for Ornament on Garden walls
at Rome P 433 see also Vol II p 85 and p 144

W[illegible] Sculp

Edinburgh Published by A Constable & Co 1820

sculpture in relief. In the interior the rooms are also decorated with reliefs. There are pictures and busts, amongst which is the bust of Donna Olimpia Maidalchini, niece of Innocent X. Pamfili. During a reign of eleven years, from 1644 to 1655, Innocent X. became unpopular by the great power he gave to this lady.

Fountains.—Near the casino are some fountains, and a water organ, which is nothing more than a barrel organ put in motion by a water wheel.

Villa Albani.—The villa Albani is a garden of moderate extent, laid out with walks and hedges.

It is visited on account of the large and valuable collection of antique statues which are kept in the casino. The casino itself is adorned with colonades and porticos. Opposite to the casino is an ornamental building, which likewise contains statues. This building is called the Cafèhaus, a German name sometimes applied in Rome to a building in a garden appropriated for refreshment in the afternoon.

The villa Albani and the collection of statues was formed in the latter half of the eighteenth century, by Cardinal Alexander Albani, an excellent judge of sculpture, and who continued to estimate the merit of statues even after he had become blind. The French took many articles from this collection, Cardinal Albani having opposed their views, and having gone to reside at Vienna. The eminent

antiquary Winkelmann was librarian to Cardinal Alexander Albani. *

* Winkelmann was a native of the country of Brandenburg. He was employed in the library of the Saxon minister Count Bunau, a copious collection of historical books, of which there is a well arranged catalogue by Frank, and which now forms part of the king's library in the Japan palace at Dresden. Winkelmann desired ardently to visit Rome for the purpose of studying the remains of ancient art, to obtain a livelihood there, he submitted to the degradation of changing his religion, and became a Roman Catholic, and Rome was his residence during the rest of his life. He was librarian to Cardinal Alexander Albani, and held the places of scrittoro in the Vatican library, and of prefetto d'antichita di Roma, or antiquary to the Pope. Winkelmann employs too much the language of a pedant and an infallible judge, and willingly censures the mistakes of others. This humour excited opposition and detraction. A painter, Casanova, exhibited two pictures as antiques, and Winkelmann gave credit to the painter's story, and published an account of the pictures; the painter, afterwards, to the confusion of Winkelmann, shewed that the pictures were works of his own pencil. Winkelmann bestows the most exaggerated praise on the productions of his friend and countryman Mengs.

Winkelmann, in a depressed state of mind, returning from a journey he had made to Vienna, met an individual, of whom he had no knowledge; he had the imprudence, without having made any inquiry concerning character or pursuits, to admit this man into his confidence, and shewed him some gold medals he had got at Vienna; the man, to get possession of the treasure, murdered Winkelmann in the inn called the Locanda Grande at Trieste. This happened in 1768, when Winkelmann was 51. The assassin did not escape the hand of justice; he

Villa Ludovisi.—The villa Ludovisi is within the walls of Rome, and contains several fine statues, amongst which is the group erroneously called Petus and Aria, which Winkelmann supposes to be the messenger sent to Canacea by her father Eolus King of the Tyrrhenians, to present her with the sword with which she was condemned to kill herself, * for the incestuous love which she bore to her brother. Another celebrated group in this collection, which was called Papyrius and his Mother, is considered by Winkelmann to represent the Meeting of Orestes with his Sister Electra.

The villas and palaces of Rome are shewn to strangers without any difficulty. The villa Ludovisi is one of the few exceptions; the proprietor refuses admission except to those who are particularly recommended to him.

was found to be a native of Pistoja, had been a cook in a gentleman's family at Vienna; when Winkelmann met with him, he had already been convicted of crimes, and was just got out of gaol.

Winkelmann's successor as director of the antiquities of Rome was Visconti, a native of Rome, who was afterwards removed to Paris by Bonaparte, and had the inspection of the statues in the Louvre gallery. Visconti wrote the descriptions in the Museo Pio Clementino, the descriptions of the statues in the Louvre, and other valuable works. He died at Paris in 1818 His brother deals in sulphur-casts of medals in the Strada Julia.

* Winkelmann, Hist de l'Art. Liv. VI. Chap. 6.

The *Villa Mattei* is situated on the Cœlian Hill. It now belongs to Emanuel Godoy, Prince of Peace. The garden contains some ancient marbles, and a small Egyptian obelisk fifteen or twenty feet in height, with hieroglyphics towards the top. On the pedestal an inscription testifies that the obelisk was restored by Emanuel Godoy, who came here to seek quiet retirement, which he had long desired. In 1819, and after the above was written, Godoy died, possessed of property to a great amount. *

The villa Mattei commands a view of the extensive and lofty brick walls, the remains of the baths of Antoninus Caracalla, situated on the Aventine Mount.

Monte Mario.---The name Monte Mario is modern, and derived from the villa of Mario Millini, situated on its summit. It was anciently called the Hill of Cinna. From this hill, which is on the right side of the Tiber, there is an agreeable view of Rome and the adjacent country.

Shells.—Sea-shells are seen in the sand and gravel of which this hill consists.

Villa Madama.—On the side of Monte Mario is the villa Madama, constructed in the year 1520. It was the residence of Madama Caterina de' Medici, niece of Leo X., and afterwards consort of Henry II. of France; the marriage took place in

See page 428.

1533, during the life of his father Francis I. Catherine was conducted to France by her uncle Clement VII.

The house was begun under the direction of Raphael, and after his death was continued by Julio Romano. By Julio Romano is the frieze of one of the large rooms painted in fresco, with festoons supported by dancing nymphs. The portico is painted by Julio Romano and Giovanni da Udine.

The villa is now occupied as a farm, and the house, become the habitation and the granary of the farmer, is quite neglected and going to decay. It belongs to the King of Naples.

Albano. Marino. Frascati.

Albano, Marino, and Frascati, are situated on that side of the Latian hills which looks towards Rome. The Albano or Latian hills are a volcanic group of hills, rising from the plain, not attached to the Apennines. The highest summit is the *Monte Cavi,* from which there is an extensive view, comprehending the lakes of Albano and of Nemi, supposed to be two ancient craters of this volcanic group.

Piperino.—At Marino and the lake of Albano the rock is piperino, a volcanic breccia containing mica, large pieces of primitive rock, and sometimes wood.

Quarries at Marino.—The piperino is suscepti-

ble of being hewed into squared stones, and is quarried near Marino for the purposes of building. The sarcophagus of Scipio, now in the museum of the Vatican, is composed of it.

Latialite.—In the piperino is found the latialite, called by some mineralogists Hauine, a blue coloured mineral discovered by Gismondi, professor of mineralogy in the university of Rome. It is generally found without a regularly crystallized form, but in the collection at the Sapienza there is a rare specimen of it in form of an octahedron, each side of which is two-tenths of an inch, of a light blue colour and translucid.

Lava of Capo di Bove.---The lava or basalt at Capo di Bove, which is quarried for pavement, is supposed by some to proceed from the ancient volcanoes of the Latian hills.

Snow for the Supply of Rome.---Every winter there falls snow on the *Monte Cavi*, the highest part of this volcanic group. A provision of this snow is made by placing the snow in pits, the upper part of the pit being left void and then filled with straw. The snow is brought from these pits at Monte Cavi to similar pits in Rome, as occasion requires. The sale of snow in Rome is an exclusive privilege granted by government. This privileged establishment for the sale of snow is called *Appalto generale delle Neve.*

In Italy, exclusive of the Alps, there are only

two summits on which there is perpetual snow, and that in small quantity; they are in the kingdom of Naples, the Sasso Grande, which Sir G. Shuckburgh found to be 9577 English feet above the sea, and another. On the Apennines of the dutchy of Modena, there are some caverns in which, as in a natural ice house, the snow, protected from the action of the sun, endures through the year.

The way from Rome to Albano passes through the gate of Saint John, called Juxta Lateranos, near the site where anciently the Porta Cælimontana was. The road is that which leads to Naples, at two or three miles from Rome, and at some distance from the road is a mineral water, used for medicinal purposes, called Acqua Santa.

Albano.—Albano is on the situation where was anciently Alba longa, founded by Ascanius, as Virgil relates.

Ancient Tomb.—Emplecton.—Near Albano is an ancient mausoleum, now reduced to an irregular mass of masonry, in which is seen the same manner of building as in the Moles Hadriani and the tomb of Metella, large squared stones being inserted at some distance from each other, in a mass of small irregular fragments, called scaglie in Italy, and pozzolana mortar. This kind of building is not practised in modern times. Most of the ancient sepulchres near Rome are composed of it, the mausoleum of Augustus, the Moles Hadriani, the tomb of Metella, Monte de Grano, and many others. It forms a mass of great

solidity like a rock; and these buildings, therefore, served as the base for the brick towers or fortresses of the chieftains in the middle ages. The solidity, and the long resistance to the action of time that this kind of structure exhibits, is owing in a great measure to the hard mass which the pozzolana forms; the piers of the aqueduct of Lyons, however, which are made in this way, and not with pozzolana, have also endured since the time of the Roman power. It is named by the ancients opus incertum and emplecton,* and by the Italians opera incerta and reimpietura. It was formed in a way similar to that in which the mud walls are constructed in Oxfordshire and at Lyons. A layer of three feet deep, consisting of the fragments of stone and liquid mortar, was put on at one time. The sides were confined by boards, or by the stones which formed the outside of the building. In some buildings, squared blocks of travertine or of piperino were placed in the courses of opus incertum to bind the courses together; this is seen in the moles Hadriani, in the tomb of Metella, in the building just spoken of, and in others, and is figured by Piranesi. † Sometimes, the interior being of opus incertum, the face of the wall was of opus reticulatum, as in the piers of the aqueduct of Lyons, sometimes of flat triangular brick; and the whole is bound together, at

* See page 380.

† Piranesi, Ant. di Rom. Tom. IV. tav. 6.

every three feet in height, by a horizontal stratum of flat quadrangular brick. *

On the other side of the town is an ancient tomb, with two or three cones of masonry, remaining erect on a quadrangular mass of building, said to be the sepulchre of Pompey, who had a villa here; it has been vulgarly and erroneously called the tomb of the Curatii. †

At Albano are villas frequented in autumn by the inhabitants of Rome.

At Albano there are considerable remains of ancient buildings, a reservoir for water composed of many large vaulted chambers, ruins supposed to be of an ampitheatre, and others. ‡

Cora.---Twenty miles beyond Albano towards Terracina, at Cora, near Velletri, are walls composed of large irregular polygonal prisms, an example of a kind of building which occurs in different parts of Italy, and supposed to be fortresses constructed by the Etrusci, Pelasgi, or some other ancient inhabitants of Italy. Petit Radel, who has written particularly on this kind of structure, terms it Cyclopean architecture. A view of the ancient buildings at Cora is published by Piranesi. §

* See figures in Piranesi, Antichita di Roma.

† See a view of this tomb in Bartoli, Sepolchri antichi. tav. 80.

‡ These remains are figured in Piranesi, Antichita d'Albano.

§ G. B. Piranesi, Antichita di Cora.

Castel Gandolfo.—A mile from Albano is the village of Castel Gandolfo, situated on an eminence, at the foot of which is the lake of Albano, otherwise called lago di Castello. The villa, or country palace of the popes, is in this village.

Lake of Albano.—The view of the lake, which is five miles in circumference, is singular. The water occupies the lower part of a basin, surrounded on all sides by high ground, so that the lake presents the appearance of a crater.

Emissarium.---We descend the steep banks in order to see the mouth of the emissarium, which gives the only issue to the waters of the lake. This outlet was made by the Romans whilst they besieged Veii, 393 years before Christ. It is a mine of five feet in height, driven through the volcanic rock for a mile and a half.* There is an arch of stone over the entrance of the emissarium. At the other extremity of the emissarium, where it gives out its water, there is also some masonry.

It is said that the emissarium was driven at a time when the water in the lake stood high. The constructors of the work may have begun, therefore, by sinking a shaft some way above the water's edge to the depth of the level to which they wished to re-

* 11,000 palms = to 7975 English feet, which is 55 feet more than a mile and a half. G. B. Piranesi, Descrizione del Emissario del lago d'Albano.

duce the water. From the bottom of this shaft they drove the mine outwards till they got to the day on the other side of the hill; they might then bore through the inundated ground into the sides of the shaft, and let the water go off into the mine, and, using the boring instrument several times, the level of the water would be reduced nearly to the level of the mine; and, lastly, when the height of the water was diminished by these bleedings, they would extend the mine from the bottom of the shaft to the lake. *

At the foot of the banks, and near the lake, is a nimpheum, a cylindrically vaulted building constructed over a spring of water, like that called the fountain of Egeria, near Rome.

In a monastery at Palazzuolo, near Albano, is a tomb with twelve fasces cut on the rock. It is unknown to whose memory it was erected. †

The way from Castel Gandolfo to Marino lies through a wood of hornbeam and deciduous oak.

Marino is a neat town, and pleasantly situated. A picture by Guercino, and one by Guido, are to be seen in the churches.

In going from Marino to Frascati, *Grottaferrata* is visited, on account of the fresco paintings by Domenichino in the church. The Tusculan villa of

* Piranesi, Descrizione del Emissario del lago d'Albano.

† See a figure in Piranesi, Antichita d'Albano.

Cicero is said to have been situated on the place where the church of Grottaferrata now is.

Frascati.—Frascati is built near the situation of the ancient Tusculum. It is styled a city from being the seat of a bishop. The name Frascati arises from the *frasche*, the branches of trees with which the inhabitants formed their houses after the destruction of their town in 1191, by the inhabitants of Rome. In the cathedral church is an epitaph in memory of Charles Edward, son of James III., the pretender to the crown of England, erected by his brother the Cardinal of York, bishop of Tusculum, that is, of Frascati. The face of the hill on which Frascati is situated is adorned with several magnificent villas.

Villa Aldobrandini.—The villa Aldobrandini, called the Villa di Belvedere on account of the agreeable view it commands towards Rome, was formed by Cardinal Aldobrandini, nephew of Clement VIII., about the year 1600, and now belongs to the Borghese family. The casino, or principal house of this villa, is handsome; and, facing the casino, there is a building with fountains, and a hall with paintings in fresco by Domenichino, consisting of landscape, with some figures. Some of these pictures have been sawed out and taken to Rome.

Another villa belonging to the Borghese family, called villa Taverna, was constructed by Cardinal Borghese, nephew of Paul V., about 1610.

The villa Mondragone, belonging also to the Borghese family, is laid out with spacious walks, and adorned with fountains.

Lucian Bonaparte's Villa.—The villa called La Rufinella formerly belonged to the Jesuits, and now to Lucian Bonaparte. The casino is handsome, and commands a fine view of the plain, and of Rome.

From Frascati the whole height of Saint Peter's, from the base of the building to the top of the cupolma, subtends about 21 minutes of a vertical circle, measured by a mother-of-pearl micrometer. This corresponds to the distance which is laid down on large maps $12\frac{8}{10}$ English miles, if the height of Saint Peter's is taken at 413 feet.

Excavations.—A mile up the hill Lucian has made excavations on the site of the ancient city of Tusculum, and has discovered a small theatre, consisting of five or six rows of stone seats in a curve. At some distance from this, an ancient street and a conduit for water are laid open.

On the road from Frascati to Rome are seen the long ranges of arches that supported the ancient aqueducts, the Aqua Marcia, and the Aqua Claudia; the first of which was celebrated as being the best water, and the other was on the highest level of all the aqueducts. By the side of these run the arches which sustain the Acqua Felice, constructed by Sixtus V.; it is on a lower level than the two an-

cient aqueducts; its source is near the Palestrina Road, and much of its course is subterraneous, or in a channel excavated in the ground.

Tivoli.

Tivoli, anciently called Tibur, is eighteen miles from Rome. We leave Rome by the gate of San Lorenzo. Some of the principal ancient aqueducts were on this side of Rome; they derived the water from the sources that flow into the Anio, and the long extended lines of their arcades are seen near the road, with those of the modern aqueduct of the Aqua Felice, which has been constructed near the ancient ones.

In the times of the prosperity of ancient Rome the road to Tivoli was thickly set with habitations, so that it is said by Florus to have been almost a suburb of Rome. * Few houses are now to be seen, and the road is through a pasture country, which is in general a plain, with some inconsiderable elevations and vallies, and destitute of trees.

The road is not kept in good order, and many articles are carried on pack-saddles by horses or mules.

Briganti.—In different places by the side of the road are exposed the detached limbs of malefactors, suspended on posts, a practice which has not pro-

* Tibur nunc suburbanum. Flor. I. 11.

duced the effect of preventing robberies on the road near Tivoli. There is a military post for keeping the robbers in awe, and all the paths near Tivoli were at this time, 4th March 1818, occupied by military, engaged in the pursuit of some banditti that seized two inhabitants of Tivoli who had gone out to shoot. The practice of these banditti is to seize on persons at a distance from the town, and to send a shepherd from the mountains to the habitation of their prisoner in the town, for the purpose of demanding a ransom.

The papal government soon after this made an agreement with several of these robbers, who delivered themselves up on condition that no capital nor severe punishment should be inflicted on them. They were lodged in the Castle of Saint Angelo, and boasted of the number of murders they had committed.

The banditti have long existed in this district. In the time of Evelyn, in 1645, it was usual for travellers to take a military escort between Rome and Naples, * and the banditti continued their depredations even during the French government, notwithstanding the activity and strong military force of that administration. †

In 1584, Sixtus V., by his active and vigorous

* Evelyn's Memoirs. London, 1819.

† Letters d'Italie, par De Chateauvieux, en 1813.

administration, suppressed the banditti during his reign, and this is recorded on one of his coins, which has the figure of a man sleeping in the country under a tree, and the inscription "Perfecta securitas."

Hydro-sulfurated Water.—In the plain below the hills of Tivoli is a small lake, the water of which contains sulphur in solution, and, four miles from Tivoli, the road crosses a canal which has been cut to let off the water from the lake. The sides of this channel in which the stream runs are white by the deposit of sulphur which is precipitated from the water. These deposits of sulphur are sometimes of a considerable thickness, and have a concentric spheroidal structure, like calcareous stalactite. The water runs into the Teverone.

River.—The Teverone is crossed twice by the road from Rome to Tivoli, first at the Ponte Mamolo, and then at the Ponte Lucano. This river, the Anio of the ancients, has its course amongst the Apennines till it comes to Tivoli, and there it falls over the rocks, forming the cascade; its course after that is in the plain. It falls into the Tiber three quarters of a mile above the Ponte Molle.

Bridges, and Monument of the Plautia Family.—Some time before we come to the mountain on which Tivoli is situated, the road passes over the bridge called Ponte Lucano, at the end of which is the circular monument of the Plautia family. This

monument, overgrown with ivy, is an agreeable object, and a frequent subject amongst landscape-painters. By the side of the round building, which is sixty English feet in diameter, * there are large tablets with inscriptions in large letters in memory of M. Plautius, and other persons of the Plautian family. †

This monument was built in the time of Vespasian, and is constructed in the same manner as the Moles Hadriani, or castle Saint Angelo, and the tomb of Caecilia Metella. The walls of these buildings are of great thickness, and are composed interiorly of small stones and pozzolana mortar, in this mass large squared stones are imbedded, and placed regularly and at a considerable distance from each other. The same structure is visible in the tomb of Metella and the castle Saint Angelo. This monument, like other ancient buildings, served as a fortress in the middle ages, and it is terminated by battlements constructed at that period. Near the monument is stationed a military post for keeping the banditti in awe.

Before we come to the monument of Plautius

* Eighty palms, Piranesi.

† The following is one of the inscriptions.

M. Plautius M. F. An. Silvanus Cos. VII. vir. Epulonum
huic senatus triumphalia monumenta decrevit ob
res in Illyria bene gestas Lartia qu f uxor
A. Plautius M. F. Virgulanus vixit an IX.

Respecting the septemviri epulonum see page 300

the town of Tivoli is seen amongst the mountains, and, to the right of the town, a large building belonging to the Jesuits of the Collegium Romanum, and used by them as a residence in autumn.

Oliveti.—The face of the mountain below Tivoli is covered with olive plantations; many of the olive trees are very old, and, though the wood of the trunk is decayed, they continue to bear fruit. Many years must elapse before a young olive tree comes to bear fruit, the old trees therefore are preserved. Ripe olives are sometimes eaten by the country people, but they are not agreeable, being of a very astringent taste.

Calcareous Rock.—The mountain on which Tivoli is situated is part of the Apennines, and consists of calcareous rock; a considerable portion of this calcareous rock is formed by the deposition of calcareous matter, which is held in solution by the water of the Teverone, and great bodies of rock, formed in this way, are seen under the cascade. This rock, in its structure, is like other calcareous stalactites, being composed of curved concentric layers.

Travertine Stone.—The Travertine stone, formerly called Tiburtine, which is the principal building stone used in Rome, and of which the Coliseum, Saint Peter's, and most of the other stone edifices in Rome are formed, is quarried in the neighbourhood of Tivoli, and owes its formation to the deposition of calcareous matter from water; it is a calcareous tufa.

This calcareous stone of recent deposition, rests upon the less recent limestone of the Apennines.

The water of some of the principal ancient aqueducts, and of those of which the water was thought most wholesome, the Marcia and the Claudia, was brought from sources which flowed into the Teverone. Some of the ancient conduits of these aqueducts are found thickly incrusted with a calcareous deposit, which, in some cases, is of such density that it can be polished, and is ranked by the marble-cutters under the class of figured alabaster, alabastro fiorito.

Medallions.—Many of the waters from the Apennines, running over limestone, become charged with calcareous matter, and form deposits similar to these at Tivoli. Rocks thus formed occur at the cascade of Terni, as before mentioned; and at the warm baths of San Filippo, near Radicofani, between Siena and Rome, casts of medallions are obtained by the deposition of the stalactitical substance from the hot water in a mould. For this purpose, water is made to fall on cross sticks, and is thereby dispersed on the surface of the moulds placed in a vessel beneath. After some time, the mould is taken out, covered with a crystallized calcareous crust, which, being detached, is a correct impression and counterpart of the mould. By passing the water through logwood, the calcareous deposit acquires a red colour.

Calcareous matter is deposited from water so as to form a compact crystallized crust, and penetrates in-

to the minute pores of substances immersed in the water. Entire unbroken hazel-nut shells are found in the north of Ireland, near Belfast, having their cavity filled with this stalactitical matter.

The inn, usually frequented by those who visit Tivoli, is called *la Sybilla*, and is close by the circular temple and the cascade.

Cascade.—The cascade of Tivoli is formed by the Teverone. The height is considerable, 100 feet and upwards, I suppose. There is a zigzag path, formed in a precipitous bank, leading down to the grotto of Neptune, near the foot of the cascade. This grotto is constantly surrounded by a cloud of spray, in which the morning sun in March is seen reflected in beautiful rainbows. The zigzag path, leading down to the grotto, was formed by General Miollis, the French governor of Rome in 1809, as an inscription testifies.

Derivations from the River.—Above the cascade, streams of water are taken off from the Teverone, some of which are employed in driving water wheels, others supply the fountains of the villa d'Este, and run through the villa of Mecænas, and under its lofty semicylindrical vaults. After having served for the mills and the fountains, the water is conducted to the edge of the precipice in different places, and falling over, forms the lesser falls called the *cascatelle*, and afterwards reunites itself to the Teverone in the valley.

Various machines are driven by the derivations from the Teverone at Tivoli.

Iron Forges.—Amongst these are iron forges, in which irregularly shaped semimalleable lumps of iron are formed into bars by means of hammers driven by water. The operation of reducing the iron into semimalleable lumps or blooms, is performed in the country towards the sea coast, where they make use of ore from the island of Elba, and the lumps or blooms are sent to Tivoli to be manufactured.

Water Bellows.—The furnace of these forges is blown by a water trunk, consisting of a long perpendicular pipe, which receives at the top a stream of water, and terminates in a trunk with free issue for the water; from this trunk the air has no other issue but the blowing pipe, which goes off from the trunk, and conveys the blast to the furnace. The blast arises from the air which is hurried down along with the current of water. This kind of bellows has long been used in different parts of Europe.

Construction of the Water-Wheels.—The water-wheels made use of for driving the machinery at Tivoli are small, being about four feet in diameter, like those used in other parts of the Roman state and in Tuscany, and upon these wheels the water is let fall through a tunnel from the height of twenty or thirty feet. The whole of the machinery is constructed in a very rude way, so that much of the power of this high and copious waterfall goes to waste. The same may be said of the water-wheels in Rome, driven by the water of the Pauline aque-

duct, as it descends from the *Porta San Pancrazio*, and falls down the side of the Janiculine.

Other Water Mills.---The other machines driven by the water of the *Teverone* at Tivoli are, a hammer for beating out copper, a gunpowder mill, grain-mills, coarse-paper mills, and some others.

Aqueducts.—Subiaco, anciently called Sublaqueum, is on the Anio, twenty miles above Tivoli. In the country between Tivoli and Subiaco, were the sources of the three principal aqueducts of ancient Rome; the Aqua Marcia, the water of which was the most wholesome, the Anio Nova, and the Aqua Claudia, which was on a higher level than any of the others. Fabretti has published a map of the district between Tivoli and Subiaco, in which are marked the remains of arched work for conveying the conduits over brooks and valleys, and other vestiges of these aqueducts, and the several springs which, according to his conjecture, supplied these aqueducts. At Subiaco there are some galleries cut in the rock, and some arched work. *

Round Temple.---The circular temple, with a peristyle which overlooks the gulf into which the cascade falls, is supposed to have been dedicated to Vesta, although it is usually called the Temple of the Sybil. The inscription on this temple does not mention either of these deities. †

* Fabretti de Aquæduct veteris Romæ, Dissertatio II. 1680.
† The inscription is, *L. Gellio L. F.*

Rectangular Temple. --- The small rectangular temple near it is said to have been the temple of the Sybil, and is now used as a church.

Small Rotonda.---Another ancient fabric, situated in a market garden near Tivoli, is a small round vaulted building said to have been dedicated to the deity Tussis. It is something like the brick temple of Minerva Medica at Rome.

Villa d'Este.—The villa d'Este belongs to the Duke of Modena, the representative of the ancient family of Este. This villa is laid out with terraces on the face of the hill, and adorned with a variety of fountains, old cypresses, and some fine lofty and spreading trees of the Platanus orientalis. The diameter of the trunk of one of the latter is three feet. This beautiful species of platanus was much used by the Romans for the sake of shade, and was first introduced amongst them from the Archipelago and Asia Minor. * It will not grow to a tree in that part of Britain which is so far north as the 56th degree, the summer's growth being frequently killed by the cold of the following winter, and almost all those in the south of England were killed some years ago in one season.

In the villa d'Este the Viburnum tinus, otherwise called Laurustinus, grows to the size of a large shrub, having stems the thickness of the wrist.

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* Plin. Hist Nat. XII. 3, 4.

The villa d'Este commands an extensive view over the plain towards Rome. There are some fresco paintings in the house by Zuccari and others. This villa is at present in a neglected state.

There is a description of the villa d'Este by the esteemed historical writer Uberto Foghetta of Genoa, who died in 1581. The Cardinal Hippolito d'Este, son of Alfonso Duke of Ferrara, and patron of Ariosto, was the founder of the villa.

Villa of Mecænas.—Below the declivity on which the villa d'Este is formed are the extensive remains of the villa of Mecænas. They consist of spacious vaulted galleries, through which runs a copious stream of water, forming cascades amongst the ruins, and derived from the Teverone.

Iron Manufactory.—Ten or twelve years ago this water was employed to work iron forges and a small blast furnace for smelting Elba iron ore. The water wheels of this establishment are of the same rude structure as the other mills at Tivoli. The height of the furnace is about eighteen feet. It is built of refractory stone from Pietra Santa near Carrara.

All these, with a manufactory of cannon ball, musket barrels, and sword blades, were established under the antique vaults of the villa. The arms produced at this manufactory were for the armies of Bonaparte, and the establishment was formed by his brother Lucian, who is the proprietor of Mecænas's

villa; but it failed of success, and the machinery and furnaces are now deserted and at a stand, and the ruin contains no other machine in action but an olive oil press.

Lucian Bonaparte has also some forges at Canino and Bracciano in the pope's territory. In the Roman state he has the title of Prince of Canino.

Opus Reticulatum.—In Mecænas's villa are seen columns whose surface is formed of opus reticulatum of calcareous stone. The opus reticulatum, or chequered masonry, consists of pieces of stone of a form approaching to that of a pyramid. The base of the stone is smooth, and forms the outer surface of the edifice, the small end being stuck into the mortar, the outer surface of each piece is a square whose side is about three inches, and the diagonal of this square surface is placed vertically. The stones are inserted in the mortar as the pieces of enamel in mosaic. The opus reticulatum is here used to form the round surface of a column, but it is more frequently seen constituting a plane surface. There is much of it in the remains of Adrian's villa, and in several ruins in Rome. The piers of the Roman aqueduct at Lyons are faced with it. Sometimes basalt, in other fabrics calcareous stone, was used for the opus reticulatum. Although the stones are only kept in their place by the adhesion of the mortar, they are generally quite firm after a lapse of many centuries. The walls faced in this way seem to have been formed in

a wooden case, to the sides of which the flat surfaces of the pieces of opus reticulatum were applied, then liquid mortar and small stones were put in to fill the centre, then another course of the reticular pieces and mortar again, and so on till the wooden case was filled. The wooden case was supported on the outside. In this way the piers of the aqueducts of Lyons appear to have been constructed, in courses of three feet high, in a way similar to that in which mud walls are built in Oxfordshire and at Lyons.

Other Ruins.---On the side of the precipitous hollow or glen opposite to that on which the town of Tivoli, with its narrow and crooked streets, and the villa of Mecænas stand, there are several remains of ancient villas, one of which is called the Villa of Horace.

View of Rome.—From the brow of the heights is an interesting view over the extensive plain in which Rome is situated. The chief object that is to be distinguished is the cupola of Saint Peter's, and the lofty eastern front of the Lateran church, which is on the side of Rome nearest Tivoli, is seen enlightened by the morning sun. The portion of the cupola of Saint Peter's, seen from Tivoli, subtends nine minutes of a vertical circle, and is, therefore, about 250 feet in height, taking the distance at eighteen English miles.

Villa Adriana.—At the foot of the mountain on which Tivoli is situated, are the remains of

Adrian's villa. The inclosure, which is extensive, is now occupied as a farm; and in different parts of it are situated the ruins of the temples, libraries, baths, and habitations for soldiers, which composed the magnificent establishment of the emperor. There were imitations of the most celebrated edifices of different countries in the world, and even a representation of the dominions of Pluto in the world to come.*

A vaulted corridor, which goes round a quadrangle, is covered with white polished stucco, with a small ornamental border painted in fresco, and running the whole length of the corridor; the colours of the painting are still entire, but more varied specimens of the fresco painting of the ancients are seen in the baths of Titus at Rome. The Egyptian idols in the museum of the Capitol were found in Adrian's villa, and the mosaic of the Pigeons which belonged to Cardinal Furietti.

AQUEDUCTS.

Waters that supply the Anio.---Most of the aqueducts which supplied ancient Rome were derived

* "Tiburtinam villam mire exædificavit, ita ut in ea et provinciarum et locorum celeberrima loca inscriberet, velut Lyceum, Academiam, Prytaneum, Canopum, Pæcilen, Tempe vocaret, et ut nihil prætermitteret, etiam inferos finxit."—Spartianus in Hadrian. C. 14.

from springs that belong to the Anio, now the Teverone, which runs into the Tiber above Rome; these aqueducts were in this respect like the water courses which are brought in a conduit moderately inclined from the upper part of a river for the purpose of turning a mill. They brought water to animate the great machine of the metropolis, and one of them really served for working the mills. It does not appear that the Romans were acquainted with the use of large pumps; for these machines, if they had been known, would have been employed to raise water from the Tiber at Rome, as they are now used in London and Paris. Neither did they employ large pipes to convey water along the curvature of the vallies, from one hill to another hill of the same altitude, although it is said that there is some appearance of this having been practised in the aqueduct at Lyons. London is now very copiously supplied with water by the seven water companies. Ancient Rome, in the first century, was supplied perhaps more abundantly. There is no doubt, however, that Rome was supplied by means of more laborious and costly structures, the water being derived from a much greater distance, without the aid of pumps, or of large conducting main pipes.

Castella.---Castellum is a reservoir, from which the water of the aqueduct was distributed in conduits and pipes to individuals and to the public

baths. The word is used by Vitruvius to denote the reservoir into which the water is poured by a water-raising wheel. *

The water was given out from the castella, or reservoirs, to those who had bought a grant of water from the emperor; it was given out by pipes, the orifice of which was of brass, and the rest of the pipe of lead. Some large ancient lead pipes of perhaps a foot in diameter were found near the Pantheon, † of a pear-formed section.

Quinaria.—The most common measure used in the grants of water was called quinaria. This measure was a pipe of the diameter of five quadrantes or quarters of a digitus, according to Frontinus, placed at a certain depth under the surface of the water.

Different Qualities of the Waters.—The water of some aqueducts was more agreable for bathing, that of others was preferable for drinking. ‡

Galen mentions that the water brought from the

* "Ita cum rota a calcantibus versabatur, modioli pleni ad summum elati rursus ad imum revertentes infundent in castellum ipsi per se quod extulerunt."—Vitruv. Lib. X. cap. 9.

† See the figure in Donatus, de Urbe Roma.

‡ "Quantum Virgo tactu, tantum præstat Martia haustu."—Plin. Hist. Nat. Lib. XXXI.

hills near Tivoli was hard and unfit for boiling vegetables, which arises from the carbonate of lime it contains; and some of the ancient conduits of the aqueducts are found incrusted with a thick coat of carbonate of lime deposited by the water, and which sometimes has been polished by the Roman marble cutters, and called an alabastro fiorito.*

The Anio Vetus was unwholesome water, not used for drinking, but only for watering gardens and for cleansing the sewers.

Some of the waters were injured by their junction with other aqueducts of muddy water. †

Size of the Conduits.—Many of the formæ, or water courses of the aqueducts, remain at this day. In one of the aqueducts Frontinus mentions that the volume of the water in the water course was 5 feet deep, and $1\frac{9}{12}$ of a foot wide.

Officers of the Aqueducts.—The aqueducts were kept in order by the continual attention of numerous officers, which was necessary for the repair of the fabrics, and to prevent the neighbouring proprietors from leading off the water for their own use, a kind of depredation that was commonly practised. †

* Frontinus.

† "Rivus purissimus sed mixtus gratiam splendoris sui amittit."—Frontin.

† See Frontinus, de Aquæductibus.



Agrippa appointed a familia or regiment of men constantly employed in keeping the aqueducts in repair. Another familia was appointed by Claudius. These two were in number about 700 men.

When Rome declined from her prosperity, the constant attention that was necessary ceased, the aqueducts soon went to ruin; they were cut during the sieges, and the water resumed its natural course in spite of the lofty arched fabrics, which Frontinus, on account of their usefulness, prefers to the pyramids, and the "idle architectural works of Greece." *

Each Aqueduct on a different Level.—Each of the aqueducts came to the city on a different level. † Two, the Anio Nova and Claudia, were high enough to supply the most elevated parts of the town.

The Aqua Virgo, not being brought from so far up the Anio, was of a low level; there were six aqueducts that had a higher level.

The Alseatina in the Transtevere was the lowest, according to Frontinus.

* "Tot aquarum tam multis necessariis molibus, pyramidas videlicet otiosas compares, aut cætera inertia, sed fama celebrata Græcorum opera?"—Frontin. de Aquæductibus Romæ, Lib. I.

† "Aquæ omnes diversa in urbem libra proveniunt."—Frontin. Lib. I.; some were, "ad libram collis Viminalis," and so forth. Front.

The oldest of the aqueducts were made with a considerable declivity, and level was thereby lost;* they were carried along the sides of the hill, and with less arched work than the aqueducts made afterwards.

Two Conduits on one Substructure.—In some cases, one line of arches served for the support and passage of two or three different conduits.† Two conduits, one over the other, are seen at this day near the Porta Maggiore. And over the monument of the Aqua Claudia, at the Porta Maggiore, there passed two conduits; that of the Anio Nova, being on a higher level, was in the highest, and below it the Claudia.

Piscinæ.—Several of the aqueducts had turbid water; and to clarify the water, they had each a piscina or reservoir, within the distance of seven miles from Rome, in which the water was allowed to rest and deposit its impurities.‡ Fabretti has given

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* "Sed veteres humiliore directura perduxerunt, sive nondum subtili explorata arte librandi seu quia ex industria terram aquas mergebant, ne facile ab hostibus interciperentur, cum frequentia adhuc contra Italicos bella gererentur."—Frontin. Lib. I.

† "Plures aquas singuli sustinent."—Frontinus de Aquæduct.

‡ "Ex his, via Latina, sex intra VII. miliarium contentis piscinis excipiuntur, ubi quasi respirante rivorum cursu limum deponunt."—Frontin. Lib. I.

drawings of some of these piscina, having guessed at their ancient form from their remains. *

The Virgo and two others had no piscina.

Abundance of Water.—The quantity of water was so great in ancient Rome, that almost every house had a water-pipe, as Strabo mentions. † Much was also employed for the public baths, the public fountains, the floating of the circus, in the workshops of the many fullers employed in washing the woollen garments, no linen being worn, and for other purposes. After the water had served for these various purposes, it was made to run into the sewers in seven streams.

Salubrity.—The superfluous water that overflowed from the castella or reservoirs served to keep the streets clean, and thereby removed the causes of unhealthiness, for which Rome was noted in more ancient times. ‡

* Fabretti de Aquæductibus.

† "The Romans attended to some kind of civil structure which the Greeks neglected, paved roads, aqueducts, and sewers. So great is the quantity of water brought into Rome by the aqueducts, that rivers flow along the streets and through the sewers, and almost every house has a water-pipe and a cistern constantly supplied On which subject much industry was bestowed by Marcus Agrippa, who adorned the city with many other public works."—The Geography of Strabo, Book V.

‡ "Ne pereuntes quidem aquæ otiosæ sunt, nam immunditiarum facies, et impurior spiritus, et causæ gravioris cœli, qui-

Frontinus states the quantity of water brought into Rome by each of the aqueducts; but it is doubtful, whether the whole quantity could be accurately deduced in modern measures from the numbers given by Frontinus.

According to Frontinus, there was no water brought to Rome in aqueducts before the 440th year after the foundation of the city, that is, 314 years before the beginning of the Christian era. The inhabitants, before that, made use of the turbid water of the Tiber, and the water of wells.

Frontinus, who was director of the aqueducts of Rome, in the reign of Nerva, in the year 97, enumerates nine aqueducts existing at Rome in his time.*

I. *Aqua Appia.*—The Aqua Appia was the most ancient, formed by Appius Claudius, who made the Via Appia.† The Aqua Appia was brought from the Palestrina Road, (anciently Præneste,) the distance of eleven ancient Roman miles,‡ carried

bus apud veteres urbis infamis aer fuit sunt remotæ."—Sexti Julii Frontini de Aquæductibus Romæ.

* Sexti Julii Frontini de Aquæductibus Romæ, libri duo.

† Liv. Lib. ix.

‡ The *ancient Roman mile* was the seventy-fifth part of a degree, according to D'Anville, consequently was $4892\frac{96}{120}$ English feet, the English mile being 5280; and it was called mille passuum, a thousand passus. The *passus* was originally the rectilinear distance between the extremities of the fingers of the

along the ground, or subterraneous, except before entering Rome, where it passed over arches for the sixteenth part of a mile.*

II. *Anio Vetus.*—The Anio Vetus was the next brought to the city. It was derived from a greater distance from springs that flowed into the river Anio, now called Teverone, above Tivoli, in the mountains. Its length was forty-two ancient Roman miles, in which distance it passed over seven-tenths of a mile of substructure.

III. *Aqua Marcia.*—The next aqueduct formed was the Aqua Marcia,† the water of which was conducted to the capitol. It was brought from fountains in the neighbourhood of Subiaco on the Anio, twenty miles above Tivoli, in the mountains, and was in length sixty ancient Roman miles, seven miles of which were above ground; and part of these seven miles was composed of the arches for crossing the brooks and vallies, and of the arches near the city. It was the most wholesome water of all the aqueducts.

right and left hand of a man, (manibus expansis,) when the arms are stretched out on each side at right angles to the body; this is the geometrical pace, and is stated by Frontinus to be five feet, the common walking pace was called *Gradus*, and measured $2\frac{1}{2}$ ancient Roman feet. From the ancient name mille passuum, the modern word mile is formed.

* Frontin. Lib. I.

† Plin. Hist. Nat. 3[illegible], cap. 1[illegible].

IV. The next was the Aqua Tepula.

V. After this the Aqua Julia was formed by Agrippa, fifteen and a half ancient Roman miles in length. Agrippa also repaired the old aqueducts.

VI. *Aqua Virgo.*—The Aqua Virgo, so called from a young girl who first pointed out the spring to the workmen, was brought to the city by Agrippa. It rises in a marsh, round which a basin of brick and mortar (opus signinum, so called from Segni, the place where the bricks were made) was constructed to retain the springs. The length of the conduit is 11 $\frac{6}{10}$ ancient Roman miles, of which one mile and two-tenths was above ground, and in that one mile and two-tenths there was the length of seven-tenths of a mile on arches.

The Modern Acqua Vergine.—This aqueduct was restored by Pius IV. about 1560. It passes through the villa Borghese, and goes to the fountain of Trevi: a branch goes off along the Strada de' Condotti. The fountains in the Piazza Navona are supplied by the Acqua Vergine.

VII. *Aqua Alseatina.*—The Aqua Alseatina was brought in by Augustus to the Transtevere. The water was of an unwholesome quality, and served only for the naumachia and for watering gardens. Its conduit was twenty-two miles long.

VIII. *Aqua Claudia.*—Caligula and his successor

Claudius brought into the city the Aqua Claudia, and the Anio Novus. The Aqua Claudia was next to the Marcia in wholesomeness, and the Anio Nova. The Claudia was brought from the way to Subiaco, in the mountains. Its length was forty-six ancient Roman miles; thirty-six miles under ground, ten miles above ground, of which ten there were nine miles on arches, and in the nine there was a continuous line of arches near the city of six miles in length.

IX. *Anio Novus.*—The Anio Novus was derived immediately from the Teverone * near Subiaco, and was $58\frac{7}{10}$ ancient Roman miles in length; near Rome it was supported by the same arches as the Aqua Claudia. Some of the arches were of a great height, 109 ancient Roman feet. These two were on a higher level than any of the other aqueducts; the Anio Novus was the highest; they were the greatest of the aqueducts of Rome, and their remains at this day are also the most considerable; many of their lofty brick arches still remain between the Porta Maggiore and San Stefano Rotondo, and also without the Porta Maggiore and on the way to Frascati. Both these waters passed over the magnificent monument at the Porta Maggiore, † which was constructed as a memorial of the great work.

Modern Acqua Felice.—By the side of the arches

* Frontin.

† See page 253.

of the ancient Aqua Claudia, on the road to Marino and Frascati, are seen the arches of the modern aqueduct the Acqua Felice, on a lower level, formed by Sixtus V. in 1587.

Time has hitherto spared many of the arches used in carrying the conduits over the hollows and brooks, and from these remains antiquaries have been enabled to trace, in some degree, the eight aqueducts enumerated by Frontinus.*

From the construction of the first to that of the last aqueduct mentioned by Frontinus, 350 years intervened.

Some of the aqueducts had become ruinous, and were choked by the calcareous matter deposited by the water when Frontinus was appointed to the care of them in the reign of Nerva.

Some aqueducts were formed after the reign of Nerva.

Aqua Sabatina,—the modern Acqua Paola.—Of these was the Aqua Sabatina, of which aqueduct much of the arched structure remains. It is supposed to have been constructed by Trajan.† The Alseatina, in the Transtevere, is considered by some to be different, because Frontinus says that the Alseatina was on a lower level than any of the other aqueducts. Venuti, however, is of opinion,

* See Fabretti, de Aquæductibus.

† Fabretti, de Aquæductibus.

that the Alseatina, the Sabatina, and the Trajana, were the same aqueduct. The Sabatina was restored by Paul V. Borghese about 1610, and brings water from the vicinity of the lake of Bracciano, anciently called Lacus Sabatinus, to the Janiculine hill, Saint Peter's, and the Transtevere. The water of this aqueduct was anciently employed for working mills, * as it descended along the steep face of the Janiculine, and it is employed for the same purpose at this day.

In Publius Victor's list of the fabrics of Rome, which is supposed to have been written in the reign of Valentinian, twenty aqueducts are named, several of which are supposed to have been only branches. †

Some of the aqueducts of Rome were repaired by Theodoric, as Cassiodorus relates. Procopius, in the reign of Justinian, enumerates fourteen aqueducts at Rome, but it is probable also that some of these were only branches.

Demolition of the Aqueducts.—Many of the aqueducts were destroyed in the sieges of Rome in the time of Justinian. If any remained entire after these sieges, they were neglected, and went to ruin; so that, in the middle ages, Rome was again brought to use the water of the Tiber, and of wells, which

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* Procop. de Bell. Goth.

† Roma Antica di Famiano Nardini, p 1666; and Fabretti, de Aquæductibus in Græv. Thes. Ant. Rom. Tom. IV.

were sufficient for the small and uncultivated population of the town. An ancient aqueduct, however, was sometimes imperfectly repaired, so as to supply a little water, as Donato mentions.*

Modern Aqueducts.—The three aqueducts that now supply Rome copiously were formed in 1560, 1587, and 1610. Of these the water of the Acqua Vergine, which supplies the fountain of Trevi, is the best.

The Brook Maranna.—Besides these aqueducts, a brook called Maranna, and anciently Aqua Crabra, runs through the town and falls into the Tiber; it is muddy, and not fit for domestic use, but it gives motion to a large paper-mill belonging to government, and is used by the makers of parchment, carta pecora, which is manufactured of an excellent quality at Rome from sheep and goat skins. A small stream also rises near the Janus, and falls into the Tiber by the Cloaca Maxima.

The Brook Aquataccio.—Another muddy brook, the Aquataccio, anciently called Almo, flows into the Tiber a little below the town.

Fountains.

The three principal fountains in Rome, each supplied by one of the three modern aqueducts, are the

* Donatus de Urbe Roma.

fountain of *San Pietro Montorio*, that of the *Acqua Felice*, and the *Fountain of Trevi.*

Aqua Paola.—The fountain of San Pietro Montorio, otherwise Il Fontanone Paolino, was constructed by Paul V. Borghese in 1612, with Travertine stone from the Forum of Nerva; Stefano Maderno was the architect. The fountain is adorned with six Ionic columns of red granite. On the attic is a large inscription commemorating the formation of the aqueduct of the Acqua Paola by Paul V. The water which supplies the fountain is brought by this aqueduct from the lake of Bracciano; the length of the aqueduct is thirty-five Roman miles, as the inscription attests.*

This aqueduct † was originally constructed by Trajan to supply the Transtevere, and called the Aqua Sabatina, from the ancient name of the lake of Bracciano. Paul V. restored this aqueduct, and built new arches where they were wanting, for crossing the low ground. Like the other aqueducts, it is partly subterraneous, or conducted along the surface of the ground, and is supported on arches only where the ground is lower than the gently inclined plane which forms the bottom of

* The modern Roman mile, according to Lalande, is about $\frac{932}{1000}$ of an English mile: $74\frac{1}{2}$ Roman miles being equal to a degree of latitude. It is 1000 passi geometrichi the o is five Roman feet.

† Fabretti, de Aquæduct.

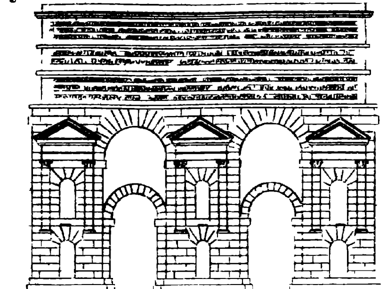
the conduit. A branch goes off two miles from the city to supply the garden of the Vatican, the fountains before Saint Peter's, and the other fountains in the Civitas Leonina, or Borgo San Pietro.

Mills.—From this fountain of San Pietro Montorio the water descends along the steep face of the Janiculine towards the Tiber, and in its course puts in motion a great many mills, employed in making paper, in fulling cloth, and in grinding corn.

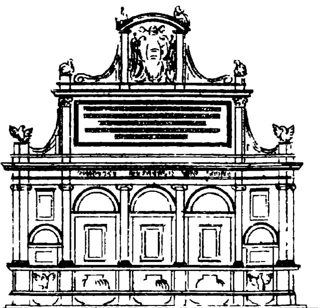
The mills of ancient Rome also were on the brow of this hill, and driven by the water of the aqueduct; and when the aqueduct was cut by the Goths during the siege, Belisarius was obliged to have recourse to a boat mill, which he caused to be constructed for grinding corn on the river, at the rapid formed by an arch of the Janiculine bridge, now the Ponte Sisto, as Procopius describes. *

* "Beyond the Tiber is a considerable hill, and there the mills were anciently situated; a large stream of water is brought to the top of the hill by an artificial aqueduct, and falls down along the face of the hill with great force. When these aqueducts were cut by the enemy, as we have already mentioned, the mills were stopped for want of water. Belisarius, however, being a man who had many resources, in the intelligent activity of his mind, devised a remedy for this urgent want. Immediately below the bridge of which we have spoken, near the walls of the Janiculine, he stretched strong cables across the river; to these cables he attached two boats of equal size, at the place where the stream was most rapid, passing through the arch of the bridge; in one

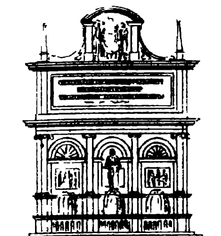
Eng[1] feet



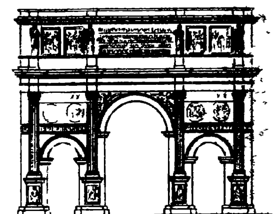
Monument of the Aqua Claudia at the Porta Maggiore P 353 471



Fountain of the Aqua Paola built in 1612 P 475



Fountain of the Aqua Felice built in 1587 by Domenico Fon-tana P 477



Arch of Constantine P 350.

Reduced by Durand

W. & D. Lizars Sculp. Edin.

Behind this fountain is the botanic garden, which is not in a flourishing condition.

Fontana di Ponte Sisto.—Part of the Acqua Paola passes the river by the Ponte Sisto, and supplies the large fountain of the Ponte Sisto, at the end of the Strada Julia, and the two fountains in front of the Farnese Palace.

Acqua Felice.—The fountain of the *Acqua Felice* is adorned with a statue of Moses striking the rock, and two other figures, with four Ionic columns of granite, and two Egyptian lions of basalt, with hieroglyphics on their base. These lions were formerly in front of the Pantheon.* The muscles of the shoulder and other parts are skilfully and accurately expressed. †

This fountain was built under the direction of Domenico Fontana, in 1587, by Sixtus V., and receives the water of the Acqua Felice, an aqueduct constructed by that pope in the years 1585, 1586, and 1587. This aqueduct brings the water from the Campo Colonna, situated to the left of the Palestrina road, fourteen Roman miles from Rome, and enters by the Porta Maggiore, where its con-

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of the boats were the mill-stones, which were put in motion by a water wheel situated between the two boats."—History of the Gothic War, by Procopius.

* See Le Statue di Roma, per M. Ulisse Aldrovandi, in Venetia, 1558.

† See Winkelmann, Hist. de l'Art. Liv. II. cap 1.

duit is driven through that remarkable ancient edifice, the monument of the Aqua Claudia.* The length of the aqueduct is twenty-two Roman miles, as the large inscription on the attic of the fountain attests. The Acqua Felice follows a course approaching to that of the Acqua Marcia and Acqua Claudia, but is on a lower level than these ancient aqueducts; it is not brought from so high up the Anio.

The name of Sixtus V. was Felice Peretti, and hence the aqueduct is called Acqua Felice.†

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* See p. 353, and p. 471.

† Sixtus V. Felice Peretti was born at the Grotta di Montalto in the March of Ancona. He was a swine-herd, and afterwards a Franciscan friar. He became general of that order. He was cardinal with the name of Cardinal di Montalto. He was elected pope in 1585, and reigned five years From political motives, he excommunicated Queen Elizabeth, but was more inclined to favour her party than that of Philip II, and was pleased at the defeat of the Spanish Armada. He was severe in punishing the banditti, and thereby brought them to order Besides the aqueduct of the Acqua Felice, he embellished the city with many other public edifices. He erected the four large obelisks, and repaired the column of Antoninus. He advanced the building of Saint Peter's, and formed the vault that constitutes the cupola. He began to repair the Vatican library, injured and dissipated by the sack of Rome in 1527. He laid on heavy taxes, and the populace, after his death, destroyed his statue. He left a large sum of money to the Holy See. His death is ascribed by some to poison administered by the Spanish faction.

Fontana,* in 1696, found that the reservoir of the Acqua Felice, at Torre San Giovanni, yielded 1080 oncie of water.

Oncia d'Acqua.—The Oncia d'Acqua is a measure of the same kind with the French pouce d'eau de Fontainier. The oncia d'acqua at Rome, according to Lalande, is the quantity of water which flows through a circular aperture, whose area is equal to twelve square minuti;† the centre of the pipe being always a palm and a quarter under the surface of the water, and an adjutage or tube of that same length being placed for the water to flow through.

Acqua Vergine.—Fontana di Trevi.—The fountain of Trevi is so called from Trivium, on account of the three principal streets that terminate in the place. The fountain is supplied by the *Acqua Vergine*, which is brought from a source $7\frac{1}{2}$ English miles distant, between the Tivoli road and the Palestrina road. The aqueduct in which this water is brought is, for the most part, under ground. It passes through the villa Borghese, and a branch goes along the Strada Condotti, from

* Fontana, Relazione dello stato vecchio e nuovo dell' Acqua Felice.

† The Palmo or Span at Rome is divided into twelve oncie, the oncia into five minuti. The Palmo da Muratore, the Architects' Palm, according to Boscovich, is, huit pouces trois lignes et un trentième de ligne French, which makes 8 [illegible] English inches

whence the street has its name. This water was brought into ancient Rome by Agrippa, and supplied his baths at the Pantheon. About 1450, the aqueduct was imperfectly repaired by Nicolas V., and the fountain was brought to its present magnificent state by Clement XII. and Clement XIII. about 1760. The architectural decorations of the fountain were designed by Nicola Salvi.

Of the three modern aqueducts, the Acqua Vergine is the most wholesome and the best for domestic use; and the pipes of this water are sold by the apostolic chamber at a higher price than pipes from the other aqueducts.

Smaller Fountains.—There are likewise a number of smaller fountains ornamented with sculpture in different parts of the city, each supplied with water from one of the three aqueducts.

Want of Cleanliness.—Notwithstanding the abundant supply of water, the want of cleanliness is remarkable in every street and place of Rome.

Mode of raising Water to the Upper Floors.—The water is not conveyed by pipes to the upper stories of houses; and in order to raise the water from the fountain in the court, there is a strong iron wire with one end fixed above the fountain and the other above the window. Along this iron wire a bucket is made to slide. The bucket has a rope attached to it, by which the bucket is let down to the water.

The rope passes over a pulley fixed above the window; the end of the rope is held by the person in the window, and, when the bucket is filled, it is pulled up by means of the rope, and sliding along the iron wire arrives at the window. This mode of raising water to the upper stories is also practised in Venice and some other towns of Italy.

BRIDGES.

There are four bridges over the Tiber at present in use at Rome.

I. The Ponte Molle, anciently Pons Milvius, is a mile and three quarters up the river from the Porta del Popolo. It was built by Æmilius Scaurus, and called Pons Æmilius, which was corrupted into Pons Milvius.* The breadth of the river at this bridge is 406 English feet. In the middle ages the Ponte Molle was broken down and rendered impassable.

II. The bridge of Saint Angelo, anciently called Pons Ælius, from the Emperor Ælius Hadrianus, who built it to serve as a passage to his tomb, the Moles Hadriani, of which fabric this bridge forms a part. A figure of the bridge is seen on medals of Adrian. The span of each of the three principal semicircular arches is 59½ English feet.† The breadth of the river at this bridge is 311 Eng-

Nardini, Rom. Vet. Lib. VIII. cap 3.

† 82 palms, Piranesi, Ant. di Rom.

lish feet.* The marble statues on the parapet, representing angels, each of which holds one of the instruments of the passion, are designed by Bernini.

III. The Ponte Sisto, so called from Sixtus IV., who rebuilt it in 1474, on the ruins of the ancient Janiculine bridge.

IV. *The Island.*---The small island called the Isola Tiberina was formed, as Pliny relates, by the corn which grew on Tarquin's fields; the people threw the sheaves of corn into the river, and the accumulation of mud on the sheaves, which were stopped by the shallows at this place, formed the island.† The field of Tarquin was afterwards made public, and formed the Campus Martius.

Ponte Quattro Capi.---The island divides the river into two branches; over the left hand branch is the Ponte Quattro Capi, anciently Pons Fabricius. The name Quattro Capi is taken from some ancient Termini of Janus Quadrifrons, one of which with four bearded faces is placed near the bridge.

The diameter of each of the two principal arches is eighty-two English feet.‡ Inscriptions that were once legible on the arch stones of the two principal arches, shew that the bridge was built under the in-

* Donati Roma.

† Plin. Hist. Nat Lib. II.

‡ 114 palms, Piranesi, Ant. di Rom. Tom. IV. tav. 20.

spection of L. Fabricius, curator of the roads, who was consul in the year 21 of the Christian era. *

Suppositions of Piranesi.—Piranesi has given a drawing of an imaginary section, in which he supposes that this bridge was constructed by turning off the water, and forming an excavation across the channel, then driving piles and building several courses of squared stones all the way across; on these the bridge was formed, the arches being complete cylinders, only the upper half of which is seen, the rest being hid by the foundation. But this design of Piranesi is merely supposition, as he could have no opportunity of seeing the foundations. Of a similar kind are his designs of the foundations of the Pons Ælius and of the Moles Hadriani. He represents the stones in these foundations as dove-tailed into one another, almost in the manner of the granites of the Edystone light-house as executed by Smeaton. †

Ponte Ferrato.—The Ponte Ferrato, of which name the meaning is not known, is otherwise called the Bridge of Saint Bartholomew, and anciently Pons Cestius. It completes the communication in this part between Rome and the Transtevere, and is

* *L. Fabricius, C. F. cur. viar. Faciundum curavit*, and over the small arches, *eidemque probavit*. See Piranesi, Antichita di Roma, and Venuti, Descr. delle Antich. di Roma.

† See Smeaton's description of the Edystone.

built over the right hand branch of the river. This bridge consists of three arches, the span of the central and largest being seventy-seven English feet.* It was built by Valentinian, Valens, and Gratian, as the inscription shews in large letters on the fascia of travertine that runs the whole length of the bridge above the arches.

At the lower end of the island was the representation of the ship in which the sacred serpent of Esculapius was brought from Epidaurus. Of some remains of this ship, built and sculptured in stone, with the figure of a serpent, Piranesi has published a drawing.†

Ferry-Boats.—There are ferry-boats for crossing the river at four different places. A hawser is stretched across the river, and fixed on each side, and along this hawser a pulley is moveable. The head of the boat is connected with the pulley by a long rope, and the boat swings in the current with its head up the stream, and by the action of the current the boat moves across in either direction, according as the helm is put.

Ruined Bridges.—There are vestiges of three other bridges. 1. The Pons Triumphalis. 2. The Ponte Rotto, anciently Pons Palatinus, three arches of which remain. It had been restored, but was

* 106 palms, Piranesi, Ant. di Rom. Tom. IV. tav. 22.
† G. B. Piranesi, Ant. di Rom. Tom. IV. tav. 15.

again broken down by the inundation of 1598, and remains in that broken state. 3. The Pons Sublicius. Of the first and third little remains. Publius Victor, in his list of the fabrics of Rome, written in the time of Valentinian, enumerates eight bridges, which agrees with the number here mentioned; two bridges being reckoned at the passage of the river at the Isola Tiberina.

Breadth of the Tiber.—The breadth of the river at the bridge of Saint Angelo and the Ponte Sisto is from 310 to 320 English feet, as before mentioned. The height of the Tiber at Rome above the sea is stated to be thirty-three English feet, and the height of the Corso Street ninety-four English feet above the sea. The depth and rapidity of the stream are considerable. It is from ten to twenty English feet in depth at mid-channel at Rome in summer, when at the lowest. It is sufficiently rapid to turn boat-mills, of which there are three or four moored with chains. The water is turbid, and of a dull yellowish colour, being loaded with sandy mud, part of which it deposits on the banks. The water is not generally used for domestic purposes, most parts of the town being supplied with water from one of the three aqueducts; but the water of the Tiber is not considered to be unwholesome, if allowed to deposit for a long time in cisterns, as Lancisi mentions.*

* Lancisi, de Cœli Romani Qualitatibus.

Length of its Course.—The length of the Tiber's course from the source near Borgo San Sepolcro in the mountains of Tuscany to Rome, is about 160 English miles; and in this course it receives the waters from the Val di Chiana, which have a course of forty miles; the Nera with a course of seventy, and the Teverone of forty-five miles, and some smaller streams. It consists, therefore, of the rain-water which falls over a considerable extent of country, and is a much larger body of water than the Arno, of which the course from the source to Florence is only seventy miles, the Chiana which the Arno receives is forty, and the length of the course to the sea near Pisa 127.

The course of the Thames to London is about 140 miles.

Floats of wood are sent down the Tiber from Perugia, but it is not navigable for boats so far up, by reason of some rapids.

Sea-gulls are occasionally seen flying about the Tiber at Rome, in particular states of the weather; they come up from the sea, which is fourteen English miles distant.

Ancient Course.—It appears that the Tiber once had its course between the Palatine and the Capitoline hills, and flowed over the place where the Forum Romanum afterwards was. *

* "Hic ubi nunc fora sunt lintres errare videres."—Ovid.

The course of the river in Rome was altered in some respects by Augustus. *

There were officers in ancient Rome, called curatores riparum et alvei Tiberis, who had the charge of keeping the banks and the channel in order. †

Inundations.—The channel of the Tiber is narrower at Rome than it is some distance above the city; and this, together with the obstructions occasioned by bridges and boat-mills, may be the cause of the inundations happening more frequently in Rome than in the adjacent parts of the river's course, although the banks of the river at Rome are pretty high, as Pliny observes, being in many places sixty feet above the bottom of the channel. ‡

The inundations of the river have often been injurious to the city. It was before mentioned, § that, in consequence of a destructive inundation which happened in the reign of Tiberius, it was proposed to turn away some of the streams that flow into the Tiber. This, however, was not executed.

In the time of Clement VII. there was a remarkable inundation of the Tiber in Rome, in the month

* "...... Amnis
Doctus iter melius."—Horat. ad Pisones.

† See Suetonius and ancient inscriptions

‡ Donati Roma

§ See page 257

of October, occasioned by the breaking of the dikes of the lake of Velino. *

The inundations, besides injuring the buildings, produce also a deleterious effect on the health of the inhabitants. After the water has subsided, the walls of the houses that were overflowed remain imbibed with moisture, and the cellars full of mud, and the inhabitants are affected with intermittent fevers. After the inundation in December 1702, Lancisi recommended to dry the walls by means of fires in the chimneys, and obtained an order from the pope to have the mud removed from the cellars; and he found, that, in consequence of these measures, the number of fevers was diminished. †

Bridges over the Anio.---The bridges in the vicinity of Rome over the Teverone, anciently called Anio, are four: The Ponte Salario, of one principal arch and two smaller arches, is situated not far from the place where the Teverone falls into the Tiber; it was built in the sixth century by Narses, the general of Justinian's army, as the ancient inscriptions on the bridge testify. ‡ The next is the Ponte Nomentana, commonly called Ponte Alla Mentana, be-

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* Fabricii, Descr Urb Rom. cap. 15.

† Lancisi, de Cœli Romani Qualitatibus.

‡ The inscriptions on the Ponte Salario, as given by Marlianus and Venuti, are,

imperante . d . n . piissimo .
ac . triumphali . semper . justiniano .
pp . aug . anno . xxxviii .—

cause it is situated on the road to the ancient Nomentum, now called La Mentana; this bridge also was built by Narses. The third, the Ponte Mammolo, which is crossed by the road from Rome to

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narses . vir . gloriosissimus .
ex . præposito . sacri . palatii .
ex . cons .—atque . patricius .
post . victoriam . gothicam .
ipsis . et . eorum . regibus .—
celeritate . mirabili . conflictu
publico . superatis .
atque . prostratis .—
libertate . urbis . romæ .
ac . totius . italiæ . restituta .
pontem . viæ . salariæ .
us—que . ad . aquam .
a . nefandissimo . totila .
tyranno . distructum .
purgato . fluminis . alveo .—
in . meliorem . statum .
quam . quondam .
fuerat . renovavit .—

On the other side are the following verses·

quam . bene . curbati . directa . est . semita . pontis
atque . interruptum . continuatur . iter
calcamus . rapidas . subjecti . gurgitis . undas
et . libet . iratæ . cernere . murmur . aquæ
ite . igitur . faciles . per gaudia . vestra . quirites
et . narsin . resonans . plausus . ubique . canat
qui . potuit . rigidas . gothorum . subdere . mentes
hic . docuit . durum . flumina . ferre . jugum

A large view of the Ponte Salario is published in Pirancsi, Antichita di Roma.

Tivoli; the name is supposed to be derived from Mammea, the mother of Alexander Severus. The fourth, the Ponte Lucano, at the tomb of Plautius, near Tivoli, which is crossed by the same road; this bridge was rebuilt by Tiberius Plautius in the time of the Emperor Claudius, as an inscription published by Gruter testifies.

Landing Quays.

The Ripetta.—At the Porta della Ripetta, above the bridges, all the boats are unloaded that bring wood, charcoal, and provisions of different kinds down the Tiber from the Sabine and from Umbria.

The Ripetta was constructed by Clement XI. Albani about 1710, of the Travertine stones of one arch of the second tier of the outer wall of the coliseum. This arch had fallen to the ground, and afforded stones for the Ripetta and for some other fabrics.*

Ripa Grande.—The Porto di Ripa Grande, situated below the bridges, and on the right bank of the river, is the landing-place for vessels that come up the river to Rome; and here the Sea Customhouse, la Dogana di Mare, is established.

Ospizio di San Micheli.—Near this is the hospital of Saint Michael, a large building, begun in 1686, and appropriated to the education of poor children, the reception of old invalids, and as a house of correction for delinquent women.

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* Venuti, Descr. delle Ant. di Rom. Capo Primo.

Navali Antichi.—The landing quay of ancient Rome was on the left side of the river, opposite to the Ripa Grande. The marble brought from Greece, Asia, and Egypt, was landed in this place; and there have been found in its vicinity blocks of marble, marked with letters which are supposed to denote the day of the marbles being shipped, the name of the merchant who shipped them, and of the consuls to signify the year. One of these inscriptions is given by Winkelmann. *

Near this, when the river is low, the remains of one of the piers of the ancient Pons Sublicius are seen.

Salt Works.—The ancient salt works were not far from the Navali Antichi, near the ascent to the Aventine; and Venuti says, that salt is still made between the Aventine hill and the Tiber. †

Walls of Rome.

Walls—The walls that surround the principal part of Rome on the left of the Tiber are mostly of brick, and have towers projecting at intervals. Some of these towers are round, some quadrangular. In the wall of the city near the Porta del Popolo, anciently called Porta Flaminia, and nearly opposite to the entrance of the Villa Borghese, is an ancient piece of wall inclined from the perpendicular, called

* Winkelmann, Hist. de l'Art.

† Venuti, Descr. delle Antichita di Roma, Parte II. cap. ii.

the Muro Torto. It is mentioned by Procopius;* Venuti considers it to be the remains of the sepulchre of the Domitia family. In the wall between the Porta Maggiore and the Porta San Giovanni, over an old gate now shut up, is an ancient inscription which testifies that the walls were repaired by Arcadius and Honorius, with the advice of Stilicho. The walls of the Transtevere are more modern; they were built about 1630 by Urban VIII. Barberini, and have triangular bastions with gorges; and the castle of Saint Angelo is surrounded with a polygon, composed of bastions, a ditch, and glacis.

Gates.

Porta del Popolo.—The outside of the Porta del Popolo is built after a design of Michael Angelo, and executed by Vignola.

Porta Pia.—The inside front of the Porta Pia, anciently Porta Nomentana, is by Michael Angelo in his peculiar style of ornament.

Porta San Lorenzo.—At the Porta San Lorenzo is a monument with three ancient inscriptions, to commemorate the restoration of the Aqua Marcia, the Tepula, and the Julia. The highest inscription ascribes the restoration to Augustus; but it is supposed that this was a compliment paid to Augustus by Agrippa, because Frontinus mentions that the restoration was the work of Agrippa. The second

* Procop. de Bello Gothico, lib. I.

inscription, which is the last in point of time, mentions the restoration by M. Aurelius Antoninus, known in history by the name of Caracalla. The third inscription, which is the second in point of time, records the restoration by Titus. * In Fabretti's drawing of this monument the three conduits are seen; the lowest of these, as is deduced from Frontinus, is that of the Aqua Marcia, above it the conduit of the Aqua Tepula, and above that the conduit of the Julia. †

Porta Maggiore.—The Porta Maggiore is formed of that remarkable ancient fabric the monument of the Claudian aqueduct, which consists of

* The inscriptions are,

"imp . caes divi . juli . f . augustus .
pontifex . maximus . cos . xii .
tribunic . potestat . xix . imp . xiii .
rivos . aquarum . omnium . refecit .

imp . caes . m . aurelius . antoninus . pius . felix . aug parth . maxim .
brit . maximus . pontifex . maximus . aquam . marciam . variis kasibus . impeditam . purgato . fonte . excisis et perforatis . montibus . restituta . forma . adquisito . etiam . fonte novo . antoniano .
in sacram . urbem . suam . perducendam . curavit .

imp . titus . caesar . divi . f . vespasianus . august . pont max .
tribuniciae . potestat . ix . imp . xv . cens . cos . vii . design . viii .
rivom . aquae . marciae . vetustate . dilapsum . refecit .
et . aquam . quae . in . usu . esse . desierat . reduxit ."

† Fabretti, de Aquaeductibus, dissertatio prima.

very large ancient inscriptions, supported by two arched ways with rusticated columns between.* One of the arched ways is used as the gate, and some walls with merli or battlements, the work of the middle ages, compose the fortifications of the gate, and conceal a part of the ancient monument.

Arch of Drusus.—Within the Porta San Sebastiano is the arch of Drusus.† Over this arch there passed an aqueduct, a branch of the Aqua Marcia. This arch is built of large blocks of Travertine. Each of the two stones forming the key of the arch is about nine feet long. There is no ancient inscription on the arch by which its original destination might be ascertained, but it is supposed by Venuti to be the arch mentioned by Tacitus built in honour of Nero Claudius Drusus;‡ and, according to Venuti, Caracalla afterwards made use of this arch for the passage of the aqueduct or branch which he added to the Aqua Marcia. This branch is mentioned in the inscription of Caracalla in page 493.

Extent of Ground within the Walls.—The walls of Rome in the time of Vespasian, as mentioned by Pliny, were thirteen Roman miles in circuit, and included the seven hills.§ The present walls, which, according to Donato,|| occupy nearly

* See page 353, and page 471.

† See page 352.

‡ Venuti, Descrizione delle Antichita di Roma, 1763.

§ Plin. Hist. Nat III. 9.

|| Donati Roma, Lib. I. cap. 16.

the same circuit as the most extended ancient wall, built by Aurelian in 270, are 12¼ English miles in circuit, and the space included within them is about five square English miles, of which only about one square mile and a half is occupied by dwellings, the rest of the ground is chiefly laid out in market gardens, vigne. *

No Account Preserved of the Population of Rome in the First Centuries of the Christian Era.—The account given by Pliny of the extent of Rome is obscure. Ancient writers have not mentioned the number of inhabitants, † but as Rome, in the time of its prosperity, was the metropolis of a much larger empire than any that now exists in Europe, it may be concluded that the number of inhabitants in Rome and the suburbs was greater than in any of the modern cities of Europe.

Conjecture concerning the Population in the year 400.—Brotier has made an estimate of the number of inhabitants in Rome, deduced from the number of houses mentioned in Publius Victor's List of the Fabrics in the Fourteen Regions of Rome, written in the time of Valentinian, about the year 400, and before the sack of the city by Alaric. In the work of

* These dimensions are taken from Vasi's Map of Rome.

† "Incolarum (Romae veteris) quod attinet numerum illum admodum difficile fuerit investigare, cum nullus eorum habitus unquam fuerit census, neque constet quando horum numerus fuerit maximus."—Isaaci Vosii de Magnit. Romae Veteris, in Graev. Thes. Ant. Rom. Tom. IV.

Publius Victor the number of dwelling-houses is stated at 48,382, of which 1780 were domus, that is, houses occupied each by one family of the richer class, and 46,602 * insulæ buildings of many apartments, each apartment being occupied by a separate family. Reckoning twenty-five individuals to each house, the result is 1,209,550 inhabitants. Gibbon adopts this estimate of the population of Rome. †

Supposing the number of houses included in the fourteen regions within the walls as stated by Victor to be accurate, there is much uncertainty with respect to the number of inhabitants to be allowed to each house.

The space within the Walls not sufficient to contain a Million.—The population, 1,209,550, is too great to be included in five square miles, even allowing for the crowded habitations of the poor, which were built to the height of many stories, ‡ considering also that much of the space was occupied by gardens of the rich, circi, baths, and other public buildings, and the public walk the Campus

* See Publii Victoris de Regionibus Urbis Liber in Nardini, Rom. Antic. Lib. VIII. cap. 1, and in Græv. Thes. Ant. Rom. Tom III.

† Gibbon, Hist. Decl. Rom. Emp.

‡ "In ea autem majestate urbis et civium infinita frequentia innumerabiles habitationes opus fuit explicare. Ergo cum recipere non posset area plana tantam multitudinem in urbe, ad auxilium altitudinis aedificiorum res ipsa coegit devenire."—Vitruv.

Martius, which was anciently not included within the walls. This space of five square miles would be very much crowded even with half a million of inhabitants. With half a million it would be much more crowded than either London or Paris is at this day.

The 1,200,000 inhabitants in London occupy a space of more than fifteen square miles.

The barrier wall of Paris, with a circuit of 13½ miles, includes a space of about nine English square miles, and a population of 713,000 inhabitants. A good deal of this space, however, is unoccupied by buildings. The poorer classes in Paris live in houses of several stories; in London they inhabit houses of two floors, and sometimes of a ground floor only.

As it appears that the space included within the wall of Aurelian, which was the most extended wall of Rome, is not sufficient for containing a population so large as that of London, nor even one equal to that of Paris, it may be supposed that a great part of the vast population belonging to such a metropolis as Rome dwelt beyond the limits of the fourteen regions, and of Aurelian's wall, in the suburbs and neighbouring villages, the extent of which is mentioned by Pliny and other ancient authors. *

* "Ulterius postea non transiit murus civitatis vetantibus, ut dicunt religionibus; sed sunt loca circum habitata omnia multa et ingentia et aperta, captuque facilia ab hostibus, et si

Great Number of Poor.—A great part of the inhabitants of ancient Rome lived in a state of poverty and idleness, and was maintained by daily distributions of bread and other provisions at the public expence.

Cicero * says there were not 2000 persons of independent fortune in Rome. A small number of individuals possessed overgrown fortunes, and drew their revenues from large landed estates situated in the different provinces of the empire, and dispersed over that large portion of the globe which extends in latitude from Britain to Africa, in longitude from Spain to Persia.

Fall of Ancient Rome.—Rome declined after the removal of the seat of empire to Constantinople, and many of the inhabitants emigrated in consequence of the sieges that afflicted the city in the reign of Justinian. It is the inhabitants, and not

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quisquam hoc intuens civitatis magnitudinem vellet investigare, errare cogeretur nec signum teneret aliquod quo ipsa se extendat vel quo desinat; sic exterius civitati junctum est et civitatis in infinitum protensæ præfert speciem."—Dion. Halic.

" Exspatiantia tecta multas addidere urbes."—Plin. Hist. Nat. Lib. III. c. v.

" Tibur nunc Suburbanum."—Flor. I. 11.

The suburbs were comprehended under the name of Rome:

" Urbis appellatio muris, Romæ autem continentibus ædificiis finitur quod latius patet."—Pandect. Lib. 50, de Verborum Significatione, Tit. xvi. L. urbis. See also L. Ædificia and L. ut Alfenus in the same title.

* Cicero de Offic. II. 21.

the buildings that constitute a city, and ancient Rome may be considered then to have perished. Totila had determined to destroy Rome utterly, so that the place should no longer be a town for the habitation of men; but he was prevailed upon to relent and spare it by the letters of Belisarius, as Procopius relates.

The population was at the lowest in the seventh or eighth century, when under the dominion of the Lombards. *

In the ninth, tenth, eleventh, twelfth, thirteenth, and fourteenth centuries, Rome was without regular government, and the population, therefore, could not be considerable. It increased after the revival of the arts.

The following are statements of the population of Rome at different periods:

In the year 400, Rome, it is conjectured, contained	1,200,000 †
In the fourteenth century, - -	33,000
In the time of Leo. X. - - -	85,000 ‡
In 1709, including 10,000 Jews, -	148,568 §
In 1765, exclusive of Jews, - -	161,899 ‖
In 1817, including 8000 Jews, -	153,000

ROME.—*Sect.* IV.—*La Sapienza.—The Jesuits' College.—Congregation de Propaganda Fide.—Academie.—Vatican*

* Muratori, Antiquitat. Italic. Diss. 21, de Italiae Statu Temporibus Barbaricis.

† Brotier and Gibbon.

‡ Lancisi de Romani Cœli Qualitatibus.

§ Labat. ‖ Gibbon.

Library.—Library of the Minerva—Library of the Sapienza.—Imperiali Library.

Academy of Painting of Saint Luke.—French Academy of Painting.—Sculptors, Canova, Torwaldson.—Manufactory of Mosaic.—Mint.—Scagliola.—Gut-strings.—Parchment.—Shell Cameos.—Goldsmiths.

Courts of Justice at Monte Citorio.—Sanctuaries.—Lotteries.—Monte di Pieta.—Current Coins.—Price of Bread.—Prohibited Books.—Toleration.—Jews.—Church of England Service.—Hospital.—Funerals.

Carnival Amusements.—Improvisatore.—Ceremonies in Easter Week.—Public Walks.—Dress.

Buffaloes.—Goats.—Plants.—Weather.—Of the Insalubrity of the Atmosphere.

THE edifice for the use of the university of Rome, called *la Sapienza*, was begun by Leo X. under the direction of Bonaroti, and finished by the architect Boromini in the seventeenth century, in a style much degenerated from the simplicity and proper selection of ornaments conspicuous in the architects of the sixteenth. At one end of the oblong court is the church, with a cupola terminating in a cone, having a spiral bas relief around it, an example of the exaggerated style practised by Boromini.

In this building the professors of the university of Rome deliver lectures on the various branches of science. The university was first established in the fifteenth century by Eugenius IV.

Library.—After the holy see had acquired the dutchy of Urbino, * the printed books of the exten-

* See the Note in page 191.

sive library of the Dukes of Urbino were given to the Sapienza; the manuscripts were placed in the Vatican. The library is open for the use of students, and contains 23,000 volumes.

Botanic Garden.—Alexander VII. Chigi, who finished the building about the year 1660, instituted also the botanic garden of the university, situated behind the fountain of San Pietro Montorio. This botanic garden, as before mentioned, is very inconsiderable. *

Collection of Minerals.—There is a collection of minerals formed in Germany and France; it was purchased by the pope about twelve years ago. To this are added the minerals of different parts of the pope's territory.

Latialite.—Amongst these last is a crystal of latialite, in form of an octahedron, of which the side is two or three tenths of an inch. Of this mineral mention has been made already in speaking of Marino where it is found.

Alum Rock of la Tolfa.—There are specimens of another remarkable mineral of the pope's territory, the alum rock of La Tolfa, situated ten miles east of Civita Vecchia. Professor Gismondi considers this alum rock to be a species of mineral distinct from others, and characterized by a peculiar crystalline form. Klaproth found the alum rock of La Tolfa to contain silica, sulphuric acid, argil, and potass. It is

* See page 276.

posed to have got the sulphuric acid by exposure to volcanic vapours. By reason of the potass it contains, it affords alum without requiring any addition, whilst the shale which is used near Whitby and near Glasgow does not yield alum in octahedral crystals; unless potass or ammonia be added; because the constituent parts of alum are sulphuric acid, argil, and potass or ammonia. The alum obtained from the rock of La Tolfa is esteemed above all other alum in commerce for the purpose of dyeing delicate colours.

Eminent Professors.—Amongst the eminent men who have taught in the university of Rome are the following: *

Copernicus taught astronomy for a short time in 1500, at the age of twenty-seven.

Eustachius, celebrated amongst anatomists for his works on the organ of hearing, his engraved anatomical tables, and his observations on the thoracic duct, was professor of medicine in 1562.

Baglivi, an eminent medical practitioner, and author of a work, De Praxi Medica, was professor of surgery and anatomy. He was a native of Ragusa, and died at 38, in 1707.

Gravina was professor of jurisprudence. His work on the origin and history of the civil law is much esteemed. He was an admirer of poetry, and of the founders of the Academy dell' Arcadia.

* See Caraffa de Gymnasio Romano.

He left his property to the excellent dramatic writer Metastasio, whom he had maintained and educated. Gravina was born in Calabria, and died in 1717 at the age of fifty-three.

Jesuits' College.—The Collegium Romanum has returned into the possession of the Jesuits since the re-establishment of the order. The order of Jesuits received the papal approbation from Paul III. Farnese in 1540, and they soon after established this college. The order having acquired excessive power by means of its artful and ambitious constitution, was abolished by a brief of Clement XIV. Ganganelli in 1762, and re-established by the pope now reigning, Pius VII. about 1815. Various branches of science are taught by the Jesuits in this establishment.

Kircher's Museum.—The museum formed by the Jesuit Kircher is to be seen in the Collegium Romanum. It is dusty and ill kept, and offers nothing remarkable on a general view. It contains some Egyptian hieroglyphics and some ancient bronzes. The Jesuit Buonanni made additions to Kircher's museum, and published a descriptive catalogue of it in 1709.

Eminent Professors.—Amongst the eminent Jesuits who have taught in this college are, *Kircher,* who wrote on some branches of natural philosophy, on gnomonics, on hieroglyphics, and other subjects; *Strada,* who died in 1649, professor of rhetoric, author of Latin Poems, which are esteemed, and of

a History of the Wars of Flanders; *Boscovich*, the celebrated mathematician, born at Ragusa in 1711.

Observatory.—In the astronomical observatory of the college they are putting up a three or four feet transit instrument by Reichenbach. There is a theodolite by the same artist, and a clock with a gridiron pendulum, by Pons of Paris. Mathematical instrument makers have little employment at Rome, and consequently their number is very small. There is one, I was informed, who had worked and learnt his art under Fortin of Paris.

Observatory of the Vatican.—Another observatory at Rome is in the Vatican, but it is not at present furnished with instruments.

Congregation de Propaganda Fide.—A large building in the Piazza di Spagna is occupied by the Congregation de Propaganda Fide, which was established in 1622 by Gregory XV. for the education of missionaries destined for distant countries, and of natives of these countries, who are instructed in theological doctrine.

Printing-House.—In 1627 the printing-house of this college contained founts of letter in fifteen different languages, and this number was afterwards augmented to twenty-three, and latterly to a greater number.

Academia dei Lincei.—The Academia dei Lincei was instituted about 1620 by Prince Frederic Cesi, a distinguished encourager of science, at the early age of eighteen.

This academy had for emblem a lynx, to denote the acuteness with which the phenomena of nature require to be examined; and the object of the academy was to promote the study of natural history.

They were occupied in publishing Hernandes's Natural History of Mexico.

Fabio Colonna, born at Naples in 1567, author of a work on the plants mentioned by the ancients, was one of the most distinguished members. Bianchi, under the name of Planco, has written a history of this academy.

Modern Academy dei Lincei.---There exists at this day in Rome an academy of the same name, in which papers on physical science and natural history are read.

Arcadia.—The Academia dell' Arcadia was instituted for the purpose of correcting the bad taste in poetry which prevailed in the seventeenth century. A collection of the lives of the eminent members has been published, with the title of Vite degli Arcadi Illustri. This academy still exists, and holds its meetings every Thursday at the 22d Italian hour, that is, about two hours before sun-set.

Vatican Library.

Origin of the Collection of Manuscripts.—Clement V. having fixed his seat at Avignon, removed the papal library to that place, where it remained till 1417, when Martin V. Colonna brought it to

Rome, and placed it in the Vatican palace. In 1432 this library was inconsiderable. To Nicholas V., and his successor Calistus III. Borgia, two pontiffs who reigned from 1447 to 1458, is due a great part of the collection of manuscripts that now forms the Vatican library. Transcribers were employed by these two popes in many different countries in copying manuscripts; and they had persons employed in collecting manuscripts in France, Germany, England, and Greece. Under some of the following popes the library was neglected. *

In 1472 Sixtus IV. della Rovere added to the library, and was the first who opened it for the use of the public, and allotted revenues for its maintenance.

Leo X. made considerable additions. In the time of Clement VII. de' Medici in 1527, happened the sack of Rome by the troops of the Emperor Charles V., and many of the books in the Vatican library were destroyed by the ignorance of the soldiers.

Vatican Library Built.—Sixtus V., about the year 1587, built the present library. Domenico Fontana was the architect.

Cardinal Baronius was librarian from 1568 to 1607, and was employed by the popes in composing

* Præf. ad Catalogum Codd. Manuscript. Bibliothecæ Vaticanæ, by Assemanni.

an ecclesiastical history in answer to the history published by Luther and the other reformers. The work of the reformers is entitled Centuriæ Magdeburgicæ, that of Baronius Annales Ecclesiasticæ.

In the seventeenth century the Vatican library was increased by three considerable additions; the first was the library of manuscripts that belonged to the Elector Palatine at Heidelberg, presented to the pope by Maximilian, Duke of Bavaria; the second, the manuscripts of the library of the Dukes of Urbino; and the third, the collection of manuscripts, which Christina, Queen of Sweden, left to the Vatican.

Number of Volumes.—The Vatican library is said to contain 30,000 volumes of manuscripts. Amongst the manuscripts that are celebrated is a Virgil with paintings, and written in carettere majusculo, in letters nearly of the form of the ancient Roman lapidary letters. A copy of the form of the letters of this manuscript is published in Astle's History of the Origin of Writing; this manuscript has been supposed to be of the fourth century of the time of Constantine. * There is also a manuscript of Terence in letters of a similar form. Several of these manuscripts were carried to Paris, as well as the collection of medals, which last has disappeared, as the keeper informed me.

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* See page 206.

First Gallery.—The first gallery of the Vatican library is 230 feet in length, and is adorned with paintings representing the actions of Sixtus V. The manuscripts are in low book cases, with imperforated doors, placed along the walls. In this gallery is an ancient calendar in form of a cross, with full length miniatures of the saints, placed at the day dedicated to each; two very large tables of granite, and some other objects of curiosity.

Greek Vases.—In this, and some of the other galleries, which are very extensive, is a valuable collection of the Greek painted earthen vases, formerly called Etruscan. It is the oldest collection of these vases, and was formed at Naples by Valetta.* One of the vases is painted with a ludicrous caricature of Jupiter and Amphytrio's wife. The wife of Amphytrio is looking from a window, Jupiter with a ladder prepared to scale the window, and Mercury. This vase belonged to Mengs, and is described by Winkelmann.†

Acts of Sixtus V.—Amongst the paintings on the wall and ceiling is the elevation of the obelisk in the piazza of Saint Peter's.

Paschal Cycle.—In one of the rooms is the marble statue of Saint Hippolite, bishop of Porto. The figure is seated, and on the chair is engraved the

* Winkelmann, Hist. de l'Art.

† Winkelmann, Hist. de l'Art. and Monumenti inediti.

Paschal Cycle in Greek. This Winkelmann considers as the oldest Christian statue that is known. A copy in marble is in Saint Andria della Valle.* Many ancient Christian works, consisting of rectangular sepulchral urns with relief sculptures of scripture histories are seen at Rome; some of these are rudely drawn in the Roma Subterranea of Bosio.

Christian Antiquities.—The fourth room contains a collection of Christian antiquities formed about 1750 by Benedict XIV. They are kept in cases, placed on each wall, with imperforated wooden doors.

Papyri.—Ancient Running Hand.—The last room has the walls hung round with manuscripts on papyrus extended and exposed to view in frames protected by glass. They are conveyances of land in the country near Ravenna, and some adjacent parts of Italy. They are in Latin, and in the ancient Roman running hand. An exact copy of the form of the letters of one of them, which is a grant of land to the church of Ravenna in the sixth century, is engraved in the Nouveau Traité de Deplomatique, and in Astle's History of Writing, plate 29. Maffei, without giving the form of the letters, has published some legal deeds relating to the sale of lands, written at Ravenna on papyrus, in the same Latin running hand, in the fifth century, before the

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* See page 313.

as got possession of Italy.* It is supposed, that the Romans, in the flourishing times of the empire, employed a running hand for common and daily purposes, in which the pen was not lifted, different from the square letters which are seen on their inscriptions on stone; and the running hand on these papyri, of the fifth and sixth centuries, is probably a modification of the running hand which was used at the beginning of the empire. This running hand is Roman, and has been erroneously called Gothic; the Goths and Lombards brought no letters nor arts with them, but made use of those that were prevalent in Italy. The word Gothic in common language in Italy is frequently used to denote the ungraceful form of a building, or of letters, without signifying that these forms were derived from the Goths.

The letters of inscriptions on stone of the middle age, which have been called Gothic,—the letters of European manuscript books of the middle age,—the black letter,—the Anglo-Saxon letters, are all visibly derived from the Roman capital letters, which we see on ancient inscriptions on stone, and which are a modification of the Greek letters. The small letters, now commonly used in printing, called by the Italians carattere stampatello, are found in manuscripts of the middle age, and arise from the

* Verona Illustrata dal Marchese Scipione Maffei, Parte Prima, p. 371.

same source, as may be seen by comparing the letters of different periods of the middle ages, published in Astle's Account of the Origin and Progress of Writing; although the resemblance of the a, the e, the g, the h, the m, and others, to the letters of ancient Roman inscriptions, is not obvious at first sight, nevertheless their origin becomes evident, when the different steps of the transition are laid before the eye, and when the modifications of form are compared in manuscripts of the different periods.

The ceiling of this papyrus room is painted by Raphael Mengs, with an emblematical figure of History, and two figures seated, one representing Saint Peter the other Moses. They are in perspective, as seen from below. These pictures possess great merit. The accessory parts of the painting of this room are the Sphinx and other Egyptian figures, in allusion to the papyrus.

French Porcelain.—In the same room are two large candelabra of Sevres porcelain, six feet high, presented by Bonaparte to Pius VII., now reigning, after Pius had travelled across the Alps and assisted at the ceremony of the coronation in the church of Notre Dame of Paris.

There is another gallery subdivided transversely by arcades.

Small Bronzes.—In the last room of this suite is a collection of gems, small statues of bronze, and ancient instruments of bronze.

Penates.—One case contains a number of ancient images of household gods, Penates. These images are rude representations of the human figure, being formed merely of a plate of bronze, cut out with projections representing the legs and arms, as imperfectly as the figure which a child cuts out of a card with scissors.

Scala Regia.—From this there is a door which opens to the foot of the great staircase, or Scala Regia, leading to the equal branched cross room, the Sala a Croce Greca, of the Museo Pio Clementino. * This staircase, as well as the cross room, the large rotonda, the gallery of the muses, and others, and many statues, were added to the museum of the Vatican by Pius VI. Braschi about 1780. The staircase is magnificently adorned with polished columns of red Egyptian granite, with columns of breccia corallina, and with beautiful door-posts of granite from the baths of Nero, which were situated between the Pantheon and the Piazza Navona.

The library of the Vatican is open for the use of those who wish to consult manuscripts.

Library of the Minerva.—Another considerable public library is the Biblioteca Casanattense della Minerva, situated in the Piazza della Minerva. It was founded in 1655 by Gregory XV.'s physician, Castellani, who left his books to the monastery of

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* See page 403.

Santa Maria sopra Minerva. The library was much augmented in 1698 by a donation from Cardinal Casanatta, a Neapolitan, and, for that reason, is called by his name. This library is open to the public, and is frequented by a considerable number of students. The monastery and library is now again in possession of Premonstratensian monks, who wear a white dress.

Strahlhof.—One of the handsomest libraries in Europe is the library of the monastery of Strahlhof at Prague in Bohemia, belonging to this same order, and which still exists unsuppressed, in 1817.

Library of the Sapienza.—The library of the Sapienza, which has been mentioned already, is also frequented by many students.

Imperiali Library.—The library founded by Cardinal Imperiali, of which there is a catalogue published by Fontanini, was kept in the Piazza Colonna, but was sold and dispersed by the Imperiali family during the last invasion of Italy by the French, notwithstanding the destination of the founder, who bequeathed it to be preserved for the use of the public.

Academy for the Education of Painters.—The Academy of Saint Luke, for the instruction of young artists, is near the Piazza Navona. The expence of the institution is defrayed by government. Instructions are given by different professors in drawing, painting, sculpture, architecture, geometry, perspective, anatomy, mythology, and the manners of an-

-ent nations. There is a large collection of plaster-casts, and opportunities to draw from life. Canova is the president.

Gallery of the Academy of Saint Luke.—The academy of Saint Luke is a society of artists with many honorary members. Adjoining to the church of Saint Luke, in the Forum Romanum, is the gallery of pictures belonging to the academy. It contains the pictures painted by each member on his admission into the academy.

The Prince Francesco di Paula, brother of the reigning King of Spain, was ambitious of becoming a member of this academy, and his own portrait, painted by himself, is seen amongst the other admission pictures. The gallery contains many portraits of artists painted by themselves. The most celebrated work in the collection is Raphael's picture of Saint Luke painting the portrait of the Virgin.

Villa Medici.—The palace of the Villa Medici was built about the year 1550. The garden front is ascribed to Bonaroti. It was acquired by Cardinal Alexander de' Medici, afterwards Leo XI. The garden is extensive, and commands a fine view.

French Academy.—This palace and villa having become the property of the crown of France, it was appropriated to the use of the French academy of painting, established at Rome by Louis XIV. Formerly the French academy occupied a palace in the

Corso. The academy consists of a director and twenty-four pensioned students, who have gained the prize for painting, sculpture, and architecture in Paris.

The last director was Le Thierre the historical painter.

There is a collection of plaster casts of the most esteemed works of sculpture.

Other Pensioners.—Some pensioned students of painting are also maintained in the Palazzo di Venezia, where the offices of the Austrian embassy are.

Canova.—In the studio or workshop of Canova, the most celebrated sculptor of the present age, are seen many of his marbles, finished or on hand, and plaster casts of most of his other works. He is now (1818) employed with the monument in memory of the Cardinal of York, which is to be erected in Saint Peter's at the expence of the British government.

Canova is a native of the neighbourhood of Bassano, in the country that formerly belonged to Venice. The following are some of his works:

The monument erected in memory of the Archdutchess Christina, by her husband the Duke Albert of Saxe-Teschen, in the Augustine church at Vienna. A work consisting of a great many emblematical figures. This is one of Canova's largest works. It cost L. 10,000 Sterling.

The tombs of Clement XIV. Ganganelli, and of Volpato, in the church of the Apostles at Rome.

The tomb of Clement XIII. Rezzonico, in Saint Peter's.

The tomb of Alfieri, in the church of Santa Croce at Florence.

Perseus, and two Greek Boxers, in the Cortiletto delle Statue in the Vatican.

Venus, in the Pitti palace at Florence.

A Magdalen kneeling.

Polyhymnia seated, in the school of painting at Venice.

A seated statue of Madame Letitia Bonaparte, mother of Napoleon, called, according to the form of her son's court, Madame Mere, and afterwards, when fortune deserted him, her name Letitia was translated by the Parisians into the ludicrous appellation of La Mere la Joie. It is said this statue was bought by the Duke of Bedford at a sale in Paris, in 1819, for L.4000.

A statue of the Princess of Lichtenstein seated, now sending from the workshop to Vienna.

The Three Graces, now, in February 1818, in Canova's workshop for the Prince Regent.

Bas-reliefs of subjects from Homer.

Helen, a bust in the possession of Madame Albricci at Venice, who has published a description of Canova's statues.

Torwaldson.—Torwaldson, a native of the King

of Denmark's dominions, is the sculptor next in celebrity in Rome. Casts of his two bas-reliefs of Night and Aurora, representing figures floating in the air, are seen in many of the collections of the academies in Italy.

Painters.—The most esteemed painter at this time in Rome is Camuccini, a native of the kingdom of Naples.

Manufactory of Mosaic.

The manufactory of Mosaic pictures belonging to the pope is in a large building to the south of Saint Peter's.

Enamels.—The building in which the establishment is situated is large, and contains a collection of enamels drawn into the form of sticks. These are arranged, according to their colours, in an extensive suit of rooms. The number of shades of colour is 17,000.

Paste.—The mastic or paste in which the pieces of enamel are stuck is composed of powdered Travertine stone, quicklime, and lintseed oil. This paste has the advantage of receiving little injury from damp.

The sticks of enamel are placed on a small anvil shaped like a chisel, and broken into pieces of the requisite size by an edged hammer. The enamel is very fusible, so that the small sticks can be melted

drawn out into a finer size at the flame of a candle, without the assistance of the blow-pipe.

After the bits of enamel are fixed into the paste, and the whole allowed to dry for two months, their upper surface is brought to a plane, and polished by means of a flat stone and emery. A lapidary's wheel and emery is also used for polishing the surface of individual bits before their insertion. After the surface of the picture is polished, the interstices between the pieces of enamel are filled up with a paste of the same colour with the adjacent pieces.

Mosaic pictures of a moderate size are imbedded in a case of copper, which has projecting crooked pieces of copper soldered to the bottom, in order to fasten the paste.

Large pictures are imbedded on a slab of stone. The volcanic stone called Piperino, and also Travertine stone, is used for this purpose. The large Mosaics, of the size of the Transfiguration, cost between L. 4000 and L. 5000 Sterling.

Cammucini, who is one of the most esteemed painters of the present time in Rome, has the inspection of this establishment.

The manufactory is about to be removed to another situation, in order to make room for the Inquisition, which is to be established in the house now, in 1818, occupied by the manufactory of Mosaic.

Rome is the principal, or rather the only, school of Mosaic painting at this day in Europe. The

great Mosaic picture of Leonardo da Vinci's Last Supper, executed at Milan, was by an artist from the Roman school.

Musaichisti.—Besides this great establishment there are many artists who work in Mosaic in Rome, and a variety of small Mosaic pictures are made for ornamenting rings, snuff-boxes, and other toys.

Mint.—In the vicinity of Saint Peter's is situated the mint, of which the rolling machines, and some other parts, are set in motion by water-wheels. *

Bronze Manufactory.—In the same suburb is the pope's foundery of bronze figures.

Pittura a Scagliola.—There are some artists in Rome who make tables ornamented with designs in Scagliola, which produce a tolerable effect. The gypseous plaster stone is roasted, pounded, and sifted, and mixed with a solution of animal glue. A coat of this white plaster is laid on for the ground of the picture, and then cavities of the form of the intended design are made in the white ground by means of an engraving tool, and the cavities are afterwards filled up with coloured plaster, so as to form the representation of the object intended to be imitated, a bird, flower, or foliage. This art was first practised in 1615 by a native of Carpi. Much depends on the proper proportion of glue. The scag-

* See Giacomo Acami dell' origine e dell' Antichita della zecca pontificia.

liola or stucco is polished with pumice stone, hone, and hæmatites or colcothar; the white plaster, which is made with isinglass, is polished with Dutch rush.

Yellow marble is the kind of marble which the artists succeed best in imitating in stucco; the yellow is formed by some oxide or salt of lead.

Gut Strings for Musical Instruments.—The gut strings for musical instruments made at Rome and Naples are more esteemed than those made in other parts of Europe. According to the accounts that have been published of the process, the strings are made in the months of August and September of the bowels of lambs seven or eight months old. The degree of heat that prevails in August and September is necessary for the success of the operation; and it is probable, that the superior quality of the Roman strings arises from the particular temperature of heat at Rome, being suitable for macerating the bowels. The bowels, after having been steeped for a considerable time in lees of wine, are twisted into strings; small strings are made by twisting two; large harp strings are composed of a greater number; and the largest string used for musical instruments consists of 150 bowels twisted together.

Parchment.—Parchment is well manufactured at Rome from the skins of sheep and goats, of which latter the number is considerable in the neighbourhood of Rome.

Cipria.—The hair-powder made at Rome is called

Cipria, and is said to be perfumed with a kind of lichen.

Cameos.—There are in Rome several artists who engrave sunk figures and cameos on Cornelian. Amongst them, Pichler the son is eminent as his father was formerly.

Shell Cameos.—A great many cameos, which sell at a cheaper rate, are made of shell. Those in which the raised figure is white, and the ground of a darker colour, are made of the large shell from the Red Sea, which seems to be the Cassis Rufa of Lamark. The shell cameos in which the figure and the ground are of the same colour are made of the large shell of the Murex Atlanticus from Sicily.

Goldsmiths.—The art of the goldsmith is practised with skill in Rome. In 1786, Ludovici was celebrated in this art, and made a model of Trajan's pillar three feet in height, in which the reliefs were accurately represented in silver. Similar copies are made by the goldsmiths of the present day.

Monte Citorio.—Monte Citorio is a small elevation, which Venuti considers to be composed of ruins and rubbish, accumulated during the middle ages. The name he supposes to have been Mons Citatorius, and derived from the citations of the heralds inviting the people to enter into the Septa * of the

* The Septa were "loca in Campo Martio inclusa tabulatis; in quibus stans populus Romanus suffragia ferre consueverat."—Sueton.

Comitia for the election of consuls, tribunes, or ædiles.

The palace of Monte Citorio is a large building, completed by Innocent XII., who, about the year 1695, established in it the tribunals called Curia Innocenziana.

The Ruota.—Of these the Ruota is the chief court in the pontifical dominions.

The name Ruota originates from the round form of the table at which the judges sit, or according to the Dictionary of the Academy della Crusca, from the judges giving their opinions in rotation.

The public are not admitted to the pleadings before this court, as I was informed. The laws collected by Justinian regulate their proceedings chiefly. The pleadings are in Latin. *

Sanctuaries Abolished.—According to the accounts of Rome, thirty years ago, the threshholds and porticoes of churches were inhabited by assassins and other criminals, who took refuge in these sanctuaries, where they could not be seized by the officers of justice. This is not to be seen now. The sanctuaries appear not to have been revived since the French had possession of the city; and the crime of assassination, for the checking of which the French issued many salutary enactments, is probably less frequent. I saw no appearance of the churches be-

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* See Cancell. Lunadoro stato della corte di Roma, 1765.

ing used as sanctuaries by criminals in any part of Italy that I visited.

Lottery.—On the balcony of the palace of the courts of justice at Monte Citorio, the government lottery is drawn twice every month. The lotteries in Italy are within the reach of all, even the poorer classes, and on that account are the more extensively pernicious. Of 100 numbers, five only are taken out at each drawing of the lottery. The person who buys a ticket fixes upon one number, and if that number is one of those drawn, he gains perhaps twenty times the stake he has made; the amount of this stake which he has paid on receiving the ticket is optional, and may be a very trifling sum. If he fixes on two numbers, then, in case of these coming out, he gains perhaps 100 times his stake. If he fixes on three, he has the chance of gaining a much larger multiple of the stake, and still more when he fixes on four or five.

The lottery in France, which is drawn every week, is on the same principle, being copied from the lottery of Genoa.

Monte di Pieta.—The Monte di Pieta, opposite the church of La Trinita de' Pellegrini, for lending money to the poor on pawns, without interest, if the sum does not exceed ten scudi, that is, L. 2 Sterling, was established as early as 1539.

In several countries of Europe the trade of pawnbroker is monopolized by government; this conti-

nues to be the case in Paris, where the business of lending money on pawns is carried on exclusively by the Mont de Pietè, which belongs to the government.

Money.

The coins most frequent in currency in Rome are,

	English Pence.
The large silver crown called *scudo*, or *moneta*, which is equal to ten paoli, is in value about . . .	53 $\frac{84}{100}$
The *half scudo*, a silver coin equal to five paoli.	
The *testone*, a silver coin equal to three paoli.	
The *papeto*, a silver coin equal to two paoli.	
The *paolo*, a silver coin equal to ten bajocchi, and in value about	5 $\frac{534}{1000}$
The *bajocco*, a copper coin equal to the tenth of a paola, in value something more than a halfpenny .	0 $\frac{5384}{10000}$

The quattrino, a small copper coin, is one-fifth of the bajocco.

Spanish piasters or dollars were frequent in circulation in 1818, and were worth 102½ bajocchi, which is a little more than the Roman scudo.

The crowns of Tuscany pass in Rome, but the Tuscan half scudi, and other Tuscan coins of smaller value, do not.

The silver current coin is sufficiently abundant, the bankers paid letters of credit in Roman crowns, or Spanish dollars, and not in paper money, as is described to have been the practice thirty years ago.

Price of Bread.

According to the assize of bread published in Rome in March 1818, the finest bread must be sold by the bakers at 2 bajocchi $3\frac{1}{2}$ fifths of bajocco, that is, about three halfpence Sterling for a pound, * Roman weight.

Prohibited Books.

The Congregation dell Indice, or committee of cardinals, whose office it is to form a list of prohibited books, affix the titles of such books as they condemn at the doors of Saint Peter's, and other churches. †

Amongst the books prohibited by the decree of December 1817 are,

Darwin's Zoonomia, translated into Italian, and published at Milan, 1805.

Sismondi, Histoire des Republiques Italiennes du oyen age, à Paris, 1809.

Villars, sur l'Esprit et l'Influence de la Reformation de Luther, à Paris, 1811.

* The Roman pound is $\frac{717}{1000}$ of an avoirdupois pound.

† See Catalano, de Secret. Congreg. Indicis.

Parny, la Guerre des Dieux Anciens et Modernes, à Paris, 1799.

The books prohibited at Rome from 1808 to 1817 are only forty in number. Amongst them are,

Zimmerman on Solitude, translated into Italian, 1804.

Memoirs de Gramont, translated into Italian, Milan, 1814.

Transactions of the Bible Society, in Italian, Naples, 1817.

All translations of the Bible into living languages, except those approved by the Apostolic See, and those published with notes taken from the fathers of the church, or from learned Catholic authors.

The congregation of the index was first established by Pius V. in 1570. The complete index down to the time of each publication has been printed several times, and forms a thick octavo volume.

Jews.—In the advertisements published by the Inquisition, and posted in the churches in the pope's territory, in 1818, all Catholics are required to denounce to the Inquisition any heretics, misbelievers, Mahometans, Jews, or Gentiles; but, in practice, the Jews are suffered, and their number at Rome is stated to be 8000. The Ghetto de' Ebrei, Jewry, or the quarter inhabited by the Jews, is near the Ponte Quattro Capi, on the side of the river. This place was assigned them in

1557 by Paul IV. The inquisition in Rome was not remarkable for severity during the last century.

Toleration of the English Service.—The toleration in the spring of 1818 extended so far as to allow the English to assemble in a room for the purpose of hearing the Church of England service read, but they were not allowed a regular and formal chapel.

During Lent in the public eating-houses in Rome there were two bills of fare, one consisting of fish, and meagre for the Catholics, the other of meat for those who did not chuse meagre. This last was sometimes entitled, Lista di grasso per gli ammalati, bill of meat for the sick.

Hospital.—The hospital of the Santo Spirito, situated near Saint Peter's, and originally instituted for pilgrims, is the largest in Rome. The building is extensive, and consists of a ground floor, and one principal floor above. The beds of the sick are placed in spacious halls on the principal floor, but, from some economical regulations, beds are crowded together in some of the halls, whilst the others are left empty. The management of the hospital is in the hands of ecclesiastics. Evelyn in 1645 describes this hospital, and observes that it is kept with "as much care, sweetnesse, and conveniency, as can be imagined;" and this observation is still applicable to the hos-

pitals in Italy at this day.* He adds, "the Italians being generally very neate;" this would scarcely be said now by any one accustomed to the cleanliness of England, which has improved much since the time of Evelyn, and had made some progress even at that time, for Erasmus, who was in England in the time of Henry VIII., and compared the manner of living with what he had seen in various parts of Europe, was disgusted with the dirtiness of the apartments in England, which he describes as strewed with rushes, seldom renewed, and the receptacle of various kinds of filth.†

Funerals.—In Rome the dead are carried in procession to the church extended on a bier, with the face and hands uncovered, and exposed to view.

Carnival Amusements.

The Corso.—The long narrowish street called the Corso, which extends an English mile in length from the Porta del Popolo to the vicinity of the Capitol, is ill paved with small stones of basalt from Capi di Bove, and the sides of the street are incumbered with esplanades elevated to the height of two or three feet, which oblige foot passengers to walk in the middle of the street. This street is used as

* Memoirs of John Evelyn, Esq. London, 1818.

† Erasmi Epistolæ.

the fashionable drive in the afternoon, and is walked by masks in the carnival.

Berlingaccio.—Shrove-Tuesday, or the last day of the carnival, is a scene of merry-making in Italy. This day is called Berlingaccio, a word which in the Dictionary Della Crusca is derived from bere and linguare, as denoting drinking and noise in which the people pass the day. Muratori derives the word from burlingi, a kind of cake made of flour which used to be eaten on that day.

On this last day of the carnival the Corso at Rome is crowded with spectators and with masks, some on foot and some in carriages. The principal amusement of the masks is to throw handfuls of powdered chalk at their acquaintances. Amongst the numerous masks some men are seen with carabines and in the dress of Neapolitan robbers.

Horse Race.---In the midst of all this some dragoons ride along and clear the street for the race, which consists of half a dozen small horses without riders. The horses are let loose from the obelisk in the Piazza del Popolo, and have a kind of spur with iron points attached on their back.

This kind of horse race was first introduced into Rome in 1470. It is called correre il palio, from the palium or silk cloak that used to be the prize.*

* Muratori, Ant. Italicæ, Diss. 29.

The masks, after sunset, light up a vast number of small tapers, which they hold in their hands, and soon after they are obliged to disperse by the orders of police.

Festino di Ballo.—In the evening of this last day of the carnival there is a public masked ball in the theatre d'Aliberti, where an immense crowd of people of various ranks is assembled. There is much dancing. Many of the young women are dressed as *Frascatane*, country girls of Frascati, and in dresses of the country people of other parts of the Roman and Neapolitan territory.

This theatre d'Aliberti is the largest theatre in Rome, and is used for the representation of musical operas. It was first established by Alibert, who came to Rome in the suite of Christina of Sweden. The interior of the house is tolerably decorated, but far inferior to the theatre Delle Scala at Milan, and to the principal theatres in London and Paris. The passages for entrance and communication to different parts of the house are low and inconvenient.

Improvisatore.

The Improvisatore Sgricci, a young man of twenty-five, gave some exhibitions in Rome in February 1818, during the absence of public amusements, which takes place in Lent. Different subjects were proposed by individuals of the audience, and each subject was written on a slip of paper. These were

put together, and three of them were drawn out by some friends of the poet, who, it is to be supposed, drew out the three subjects that the poet had previously fixed upon and studied. The subjects were, 1. The Dispute between Ajax and Ulysses for the Arms of Achilles. 2. The Creation of the World. 3. Sophonisbe. On the first subject he recited a poem of three quarters of an hour. The second was a poem of shorter duration. Of the third subject he formed a tragedy, in which he personated six characters, and a chorus of African matrons; this dramatic piece lasted two hours and a half. The whole was declaimed with great animation.

Preaching in Lent.

Homilies and sermons are frequent in the churches at Rome during Lent, by preachers of celebrity, who come from different parts of the country to exercise their eloquence. The other towns of Italy and of France are also frequented by preachers during Lent.

Le Funzione, or Ceremonies in Easter Week.

The ceremonies in the pope's chapel during Easter week, la settimana santa, attract a great many strangers to Rome. The number of English passports this year, 1818, during that week, was about 700; some of these passports included a whole family.

Distribution of the Palms.---On Palm Sunday in the chapel in the Quirinal palace the pope performs

the ceremony of distributing the palms. They are leaves of the date palm, which are brought from Naples, or taken from the three or four date palms that grow in the gardens at Rome.

Service in the Sistine Chapel.—In the Sistine chapel on the Wednesday, Thursday, and Friday of Easter week, is chaunted the service of Tenebræ, at the twenty-second Italian hour, which is about an hour and a half before sunset. The plaintive and solemn music of the lessons taken from the Lamentations of Jeremiah, and the Psalm Miserere, are sung by such excellent and well trained voices, that it has been found impossible to execute the same music with equal effect in other countries of Europe. The composition of the music of the Miserere is admirable; that performed on the Wednesday is by Allegri; on another day a Miserere of the composition of Iomelli is sung. No musical instrument is employed in these services in the pope's chapel.

The pope is present on his throne, and the cardinals in their robes, attended by their train-bearers.

Fans of Peacocks' Feathers.—Two flabelli or large fans of peacocks' feathers are carried before the pope. They may have been originally used to drive away flies; and the eyes of the peacocks' feathers are said to signify the watchfulness the pope ought to have over the church.

Cardinals.—The number of cardinals has varied

since the ninth century, when there was a cardinal priest appointed to govern each of the twenty-eight parishes of Rome.* The definite number is now seventy-two; frequently this number is not complete. Sixtus V. ordained that there should always be three cardinals taken from mendicant orders, and by this regulation a chance of the sovereignty is given to persons of the lowest degree. The Cardinal Camerlingo, so called because he is at the head of the Camera Apostolica, has the most eminent dignity at court. The cardinals are commonly chosen from three professions, the ecclesiastics, the members of monastic orders, and the judges of the courts of law at Rome. The reigning pope was of a monastic order. Of the cardinals who have held places in the courts of justice is Gonsalvi, the most active of the pope's ministers.

Conclave.—For the election of a pope the cardinals are inclosed in conclave in the Vatican palace, and if the election is not made in eight days, the cardinals are reduced to bread and water for their only sustenance. There is an account of the conclave at which Cardinal de Retz was present in 1655, in the memoirs of that cardinal, and the conclaves from Alexander VII. are described in the work entitled, Conclavi de' Pontifici Romani, 1667.

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* See Thomassin Discipline de l'Eglise; Mosheim's Ecclesiastical History; and Muratori Antiq Ital. Diss. LXI., de Cardinalium Institutione.

Royal Boxes.—Three boxes were allotted in the Sixtine chapel to persons of royal birth, this year, (1818,) at Rome; the first to Charles IV. the abdicated king of Spain; the second to the abdicated king of Sardinia, brother of the reigning king; and the Dutchess of Chablais of the Sardinian family; and the third to the Prince Royal of Bavaria.

Swiss Guards.—The doors of the chapel are guarded by the Swiss guard of the pope, in old fashioned party-coloured uniforms and cuirasses. These soldiers are natives of the Roman Catholic Cantons of Switzerland; many of them scarcely understand Italian, and speak only German.

Washing the Feet of the Pilgrims.—In an apartment of the Vatican palace the pope, though old and feeble, performed the ceremony of washing the feet of twelve poor men called pilgrims; they are persons in deacon's orders; they are dressed all uniformly in white camlet. The pope afterwards handed the dishes to them whilst they sat at table. The ceremony of washing the feet of twelve poor men is performed in Easter week in several Catholic courts; at Florence by the grand duke; in France, since the return of the Bourbon family, by a prince of the blood. In the time of Charles I. it was the custom to wash the feet of twelve poor men at Whitehall, as Evelyn mentions. *

* Evelyn's Memoirs. Lond. 1819.

On Thursday evening after mass the pope deposits the host in the altar of the Pauline chapel, which is lighted with a multitude of tapers. This ceremony represents the deposition of the body of Christ in the tomb.

Illuminated Cross.---On Good Friday the hundred lamps of the shrine of Saint Peter are put out, and an illuminated cross is suspended on the eastern verge of the cupola within Saint Peter's.

The Benediction.—On the forenoon of Easter Sunday the pope in his tiara, or triregno, and surrounded by the cardinals, delivers his benediction from the gallery on the front of Saint Peter's. The people are in great numbers, their heads uncovered and kneeling. Immediately after the benediction has been pronounced, a paper is thrown from the gallery amongst the people, inscribed with the indulgences conferred on different churches. The pope in his tiara attends at the service in Saint Peter's. The features of the pope are of a mild and dignified character.

Pilgrims.—A few pilgrims, not above half-a-dozen, were seen at Rome in Easter week, 1818. They wear a cloak of black waxed cloth, having a large flap covering the shoulders, and a long staff.

Fire-Works.—After Easter Sunday, in honour of the birth-day of the reigning pope, the outside of Saint Peter's was illuminated, and the fire-works called the Girandola were discharged from the castle of

Saint Angelo. There were also some houses illuminated in the town.

Procession on Corpus Christi Day.—The ceremonies of Corpus Christi day, or Corpus Domini, a moveable feast happening in May and June, the Fete Dieu of the French, which were established in 1261 by Urban IV., in commemoration of the institution of mass, are also to be mentioned amongst the most magnificent at Rome. The pope is carried in procession on a kind of throne under a canopy. He is seated, but the chair is so formed that he appears to kneel before an altar with the host placed on it. The streets are not hung with tapestry as on the Fete Dieu at Paris before the revolution, and since the return of the Bourbons, but tapestry is displayed in the colonade of Saint Peter's.

The church ceremonies of Rome are described in Catalano Cæremon. S. Rom. Eccl.; Gattico acta Selecta Caerimonialia S. Rom. Eccles., and other more recent works.

Public Walks.—The public ride and walk along the hill in front of the Trinita de' Monti and Villa Medici is much frequented by company in carriages and on foot; and walks have been laid out on the adjacent ground, which extends to the walls. This public walk, and one near the Coliseum, were begun some years ago by the French when they had possession of Rome. The French made public walks also in Venice and other towns. The Corso is the common drive for carriages in the afternoon.

Dress of the Country People.—The country people in the neighbourhood of Rome are dressed in very coarse clothing, and shew no attention to cleanliness. Even on Easter Sunday, the chief festival of the church, groups of country people, men and women, were seen in Saint Peter's in their coarse and squalid dress. The figures and peculiar dress of the country women of Frascati, the Frascatane, and of other places near Rome, are often introduced in pictures, and there the disagreeable part of the figure is concealed, for the art of painting is not able to denote very precisely the difference between cleanliness and the contrary.

The country men, in the neighbourhood of Rome, generally carry an oiled-cloth umbrella for protection against the rain.

The broad cloth used in the dress of the better classes is imported from England and from France.

Buffaloes.—Buffaloes are sometimes used in drawing waggons in Rome, and the neighbouring country, but oxen are more frequently employed for that purpose. Buffaloes thrive in marshy situations. There are many in the Pontine marshes, as Lalande observes, and they are accustomed to roll themselves in the mud. Their flesh is not esteemed good for eating.

Cheese of Buffalo Milk.---Small cheeses of buffalo milk are common in Rome. They are of the size of the fist; they have a fibrous texture when

broken, and a peculiar taste, which is not disagreeable.

Buffaloes, (Bubali,) according to Paul Warnefrid, were introduced into Italy by the Lombards about 580; but there is some doubt about the meaning of the word Bubali employed by Warnefrid.

Goats.---Goats are frequent; flocks of them are driven along and milked in the streets in the morning. Kid is a common kind of meat in the markets in March.

Amongst the fish in the market at Rome is sturgeon, which is caught in the Tiber. Frogs are sold in the markets and eaten.

Plants.—In the gardens in Rome, on the 16th of March, violets, stock-july-flowers, hyacinths, tulips, peach trees, green gage plum trees, were in flower. Garden beans a foot high and in flower.

Lazarelli.—The Cratægus azarolus, which bears the fruit called Lazarelli, is common in the gardens. This tree is called by Wildenow Pyrus azarolus, and is described by Scopoli;* the leaves resemble the common hawthorn; the fruit is of the form of a very small apple, and is of an agreeable taste. The tree requires a warm temperature like that of Italy. Gooseberry and currant bushes are rarely seen in the gardens. Lemon trees are the only fruit trees that are extended upon walls, and they require to

* Scopoli Carniol. II. No. 597.

be covered in winter by small houses or sheds of boards and reeds, as before mentioned.*

Palms.—There are two or three date palms twenty to thirty feet high in gardens in the open air, but the weather is scarcely warm enough; they grow more freely at Naples, where small walking canes are made of the middle rib of the leaf. That kind of Cynara called Cardoon is cultivated in great quantities for the table.

The root called Pastinaca at Rome, used as an esculent vegetable, is not cultivated, but collected in the fields. The leaves resemble those of a thistle.

Small channels conduct water alongside the beds in gardens, and from these channels the gardener throws the water on the beds with a scoop.

The botanic garden is inconsiderable, and with a small conservatory, poorly furnished with plants, is situated near the fountain of the Acqua Paola, as before mentioned.†

Spontaneous Plants.—The following plants are amongst those that grow spontaneously in Rome: the small creeping Antirrhinum on walls, called Antirrhinum cymbalaria; Antirrhinum majus; Capparis spinosa; Cotyledon umbilicus; all these are found on the old walls. Viburnum tinus; Phylirea alaternus; the common wild fig, called by the ancients Capri ficus; the Cheiranthus, called stock-july-flower; Cheira

* See p. 433. † See p. 477 and p. 501.

thus murorum, or wallflower; bramble; two kinds of hyacinth; these grow on the rubbish amongst the ruins, as at the Coliseum, and on the ruins of the Coliseum many other plants are found.

Cyclamen Europeum under hedges; Asplenium ceterach on the sides of wells and in subterraneous vaults; Anemone pulsatilla and our garden anemone in dry fields.

Weather.—At Rome during fifty-two days, from the 3d of February to the 27th of March 1818, there were nineteen days in which it rained, and some of these were cold and disagreeable. On most of the other days there was sunshine, sometimes the sky was free from clouds, and the warmth of the sun in the afternoon was considerable.

Fahrenheit's thermometer, placed on the outside of a window about eight in the morning, during the above mentioned period of fifty-two days, stood from 41° to 51°, and sometimes as high as 57°.

Annual Quantity of Rain.—The quantity of rain that falls during the year in Rome is considerably greater than the annual quantity in Paris or London, as Lalande states. November and December are the most rainy months, and in these two months the quantity of rain that falls at Rome is very considerable.

Of the Quality of the Atmosphere at Rome in respect to Salubrity.

The situation of Rome, Strabo observes, was fixed by necessity, not by choice. *

The Campus Martius and other low parts of the town are subject to inundations of the river; and it appears, that, in remote times, the course of the river was between the Capitoline and Palatine hill,

* "The first inland city after Ostia is Rome, the only city situated on the Tiber; concerning which, we have observed, that its situation was originally fixed upon by necessity, and not by choice. It may be added, that those who afterwards enlarged the city were not the masters of what was best, but were obliged to suit the new additions to the old structures of their predecessors. In the beginning of Rome, any one judging from the situation, would not have predicted its future prosperity and unexampled fortune, but by activity and valour, the Romans having got possession of the surrounding territory, there appeared a concourse of advantages which exceeded those of all the places on the globe, however favoured by their natural position."—The Geography of Strabo, Book V.—The advantages of the situation of Rome, which Livy introduces in the speech of Camillus, are, the healthiness of the hills, the convenience of the river for bringing provision from the inland regions, and also from the sea; the sea not too distant, and not so near as to expose the city to the attack of Corsairs; the situation of the city in the middle of Italy.

and where the Forum Romanum was afterwards situated. *

The low grounds situated between the small hills in Rome and the neighbouring country have no outlet for the water, and if artificial drains are not made these low grounds become marshes. Stagnant water, in countries where the heat is considerable, is found by experience to affect the inhabitants with intermittent fevers. This effect probably arises from the effluvia of putrid, animal, and vegetable matter, contained in the water. In cold winters, and in countries where there is little heat, the unhealthiness from the vicinity of stagnant water is not re-

* "Hic ubi nunc fora sunt udæ tremuere paludes;
Amne redundatis fossa madebat aquis.
Curtius ille lacus, siccas qui sustinet aras,
Nunc solida est tellus, sed lacus ante fuit.
Qua velabra solent in circum ducere pompas,
Nil præter salices, crassave canna fuit.
Sæpe suburbanas rediens conviva per undas,
Cantat; et ad nautas ebria verba jacit.
Nondum conveniens diversis iste figuris
Nomen ab averso ceperat amne Deus. (Vertumnus)
Hic quoque lucus erat juncis, et arundine densus,
Et pede velato non adeunda palus.
Stagna recesserunt; et aquas sua ripa coercet;
Siccaque nunc tellus; mos tamen ille manet.
Hic ubi nunc fora sunt lintres errare videres,
Quaque jacent valles, Maxime Circe tuæ."
Ovid. Fast. Lib. II.

marked. Chemistry has not been able to detect any-thing peculiar in the gases composing the air of the places where intermittent fevers prevail.

At Rome, a rainy season, Lancisi observes, is the most unhealthy, and in such seasons the hospitals receive a greater number of labourers from the country affected with fever. A dry and warm summer is more healthy, and the labourers do not take the fever from exposure to the direct and violent heat of the sun.

It is the opinion of Lancisi that all the unhealthy situations in Rome and the neighbouring country are marshes formed in the low grounds, from the rain and hill water which collects in the valleys, and which does not run off unless a channel is formed by artificial drains. Any low, hollow, and moist situation in this district is found to be unhealthy; an elevated situation exposed to the winds is healthy, and places that were unhealthy have become healthy after having been drained and freed from the stagnant water.

Insalubrity mentioned by the Ancients.—The unhealthiness of the neighbourhood of Rome is mentioned by Livy; * the Vatican is mentioned as unhealthy by Tacitus; † Strabo speaks of the unheal-

* Liv. Lib. VII.

† "Postremo ne salutis quidem cura infamibus Vaticani locis magna pars tetendit, unde crebræ in vulgus mortes, et

thiness of the Pontine marshes; * Seneca of the unhealthiness of Ardea.

Insalubrity diminished by the Drains and Aqueducts.—During the growth and prosperity of ancient Rome, sewers were formed to carry off the water from the valleys in the city, † and there was a plentiful supply of running water from the aqueducts, which, by carrying away the impurities, diminished the unhealthiness that formerly prevailed, as Frontinus observes. ‡

Destruction of the Aqueducts.—During the three years siege of Rome by Totila and Vitiges, the aqueducts were cut, as Procopius relates, and the water continuing to flow through the upper part of the conduit might form marshes, and render the country unhealthy for a long time after.

Insalubrity of Rome in the Middle Ages.—In the eleventh century Rome is described by Saint

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adjacentia Tiberi Germanorum Gallorumque obnoxia morbis corpora fluminis aviditas et æstus impatientia labefecit."—Tacit.

* Strab. Lib. V. cap. 12.

† "Tarquinius infima urbis loca circa forum aliasque interjectas collibus convalles, quia ex planis locis haud facile evehebant aquas, cloacis e fastigio in Tiberim ductis siccat."—Liv.

‡ "Ne pereuntes quidem aquae ociosae sunt, nam immunditiarum facies, et impurior spiritus, et causae gravioris cœli, quibus apud veteres urbis infamis aer fuit, sunt remotae."—Frontin. de Aqueduct.

Peter Damian as much inflicted with fevers, ferax febrium, and at the end of the twelfth century, Innocent III. speaks of the unhealthiness of Rome; by reason of the prevailing unhealthiness, the Emperor Frederic I. was obliged to withdraw his troops from Rome to the hills.

The city became still more ruinous, marshy, and neglected, during the seventy years that the popes resided at Avignon.

At the return of Gregory XI. from Avignon the number of inhabitants in Rome was 33,000.

Improvement of Rome.—Julius II. began to improve Rome by buildings. He commenced the operations for erecting the new basilic of Saint Peter's, and laid out the Strada Julia, formerly the Via Recta, which is still one of the principal streets of Rome, extending half a mile in a straight line up the river from the Ponte Sisto.

Leo X., during his ten years reign, brought new inhabitants to settle in Rome from Como and Bergamo; they built in the Campus Martius, which in ancient Rome was an open plain; and in building they necessarily formed drains to carry off the water from the marshy places. The number of inhabitants was increased to 80,000.

By reason of the troubles and the sack of Rome, in the reign of Clement VII., the city relapsed into desolation, and, according to Jovius, the number of inhabitants fell to 32,000.

From the death of Clement VII. to the time of Lancisi, a period of nearly two centuries, Rome was improved by the formation of sewers, new buildings, the opening and paving of streets, all which operations tend to dry the ground, and to drain off stagnant water, thereby making the situation less unhealthy.

Improvement of the Vatican.—The Vatican became more healthy after the establishment of the brick and tile kilns, and the manufacture of coarse pottery, which is carried on to the south-east of Saint Peter's, and still more, by the building of the church of Saint Peter's, which was much advanced by Sixtus V., and the Vatican library and palace by the same pontiff; and afterwards by Alexander VII., who built the colonade of Saint Peter's, cleared the ditch of the Castel Sant Angelo, and formed drains through the neighbouring fields. By these improvements the Vatican has become as healthy as any of the less elevated parts of Rome; but it is not so healthy as the more elevated parts of the hills of Rome. It happened that the cleaning of the drains was neglected for one or two years, and unhealthiness again appeared in the Vatican and Civitas Leonina, or Borgo.

Improvement of the Campo Marzo.—The Campus Martius was rendered more healthy by the building of the Borghese palace by Paul III., and afterwards by the building of Monte Citorio by In-

nocent XII., and the construction of the landing quay, la Ripetta, in an unhealthy place by Clement XI., in Lancisi's time.

The Pincian valley became more healthy by the building of the College de Propaganda Fide by Urban VIII., and by collecting the water in sewers.

Innocent X. rendered the Piazza Navona more healthy by building the church of Santa Agnese.

Improvement of the Termi.—The baths of Diocletian were improved and rendered more healthy by the broad and rectilinear street from the Quirinal hill to the Porta Pia, opened by Pius IV., and the continuation of that street from Santa Susanna to the pope's palace at the marble horses, by Sixtus V.; and afterwards the baths of Diocletian were as healthy as any of the higher parts of the hills in Rome.

Clement XI., by the advice of Lancisi, had sewers constructed from the south slope of the Quirinal hill to the Tiber.

The region of *San Francesco*, near the Ripa Grande, was unhealthy by reason of the gardens, which must be irrigated, and give out the effluvia of stagnant water; but afterwards, when houses were built there, in the reign of Clement X., the unhealthiness disappeared.

The *Circus Maximus*, in Lancisi's time, was marshy, and one of the most unhealthy parts of the town.

Inundations of the River.—The overflowing of the Tiber, which takes place more in Rome than on other parts of the river, is a cause of unhealthiness to the Campo Marzo, and other places subject to the inundation. The Tiber carries in its water and deposits a muddy sand, and after the water has retired the cellars and low parts of the houses are covered with this wet slime. After the inundation in December 1702, Lancisi obtained an order from the pope to have the slime removed from the cellars and houses that had been under water; and he says, that, in consequence, the intermittent fevers were less frequent for some years than they had been before. After these inundations the walls of the houses are left imbibed with moisture, and they ought to be dried by lighting fires in the rooms; the neglect of this produces fevers.

The River obstructed by Boat-Mills and Piers of Bridges.—Belisarius, during the siege by the Goths, first established floating-mills on the Tiber,* and there are still four or five moored on the river by chains, although there is a great fall of a copious stream from the Acqua Paola down the face of the Janiculine employed for driving mills, which might do more work if they were constructed according to the rational improvements of Smeaton and other modern engineers.

The disadvantage of the floating-mills is, that they

* See page 476.

obstruct the course of the river, dam up the water, and make the inundations rise higher than they otherwise would.

The thick piers and moderate sized arches of the bridges contribute also to increase the inundation; the channel would be less encumbered if the arches were of a greater span, as many of the modern bridges in London and Paris are.

Heat in the Town and Winds.—Horace mentions the autumnal heat as unhealthy in Rome. *

Nero was most hurtful to the state by his extravagant taste for building, as Suetonius mentions. † Some admired his public buildings, but detested the tyrant. ‡ After the fire, however, in the reign of Nero, a great part of the city was rebuilt with regular and wide streets; and Nero made many useful regulations with respect to the form of the houses and for the prevention of fires; but it was thought that the old narrow streets and high houses contributed more to the health of the inhabitants, affording shelter from the violent heat of the sun, to which the wide streets were too much exposed. §

* Hor Epist Lib. I. ch. 7.

† "Non in alia re damnosior (Nero) quam aedificando."—Sueton

‡ "Quid Nerone pejus
Quid thermis melius Neronianis."
Martial, Lib. VII. Epig. 40.

§ "Domus non ut post Gallica incendia nulla distinctione, vel passim erectæ; sed dimensis vicorum ordinibus et latis via-

In modern Rome the great heat of the sun in summer is very inconvenient to those who walk the streets, and a carriage is therefore said to be a fifth element, and almost as essential and indispensable to an inhabitant of the city as earth, air, fire, and water.

The unhealthy season of the year in Rome is considered to be from the 22d of July to the first rains in October; and during that period it is thought dangerous for the health to dwell in any part of the country near Rome except the high grounds.

rum spatiis, cohibita ædificiorum altitudine, ac patefactis areis, additisque porticibus, quæ frontem insularum protegerent. Eas porticus Nero sua pecunia extructurum, purgatasque areas dominis traditurum pollicitus est. Addidit præmia pro cujusque ordine, et rei familiaris copiis, finivitque tempus intra quod effectis domibus, aut insulis adipiscerentur. Ruderi accipiendo Hostienses paludes destinabat, utque naves, quæ frumentum Tiberi subvectassent, onustæ rudere decurrerent. Ædificiaque ipsa certa sui parte sine trabibus, saxo Gabino, Albanoque solidarentur, (the Albano stone is piperino,) quod is lapis igni impervius est. Jam aqua privatorum licentia intercepta, quo largior, et pluribus in locis in publicum flueret, custodes; et subsidia reprimendis ignibus in propatulo quisque haberet, nec communione parietum, sed propriis quoque muris ambirentur Ea ex utilitate accepta decorem quoque novæ urbi attulere. Erant qui crederent, veterem illam formam salubritati magis conduxisse; quoniam angustiæ itinerum et altitudo tectorum non perinde solis vapore perrumperentur; at nunc patulam latitudinem, et nulla umbra defensam, graviore aestu ardescere."—Tacit. Annal. L. XV. 43

On Sundays, in autumn, the Piazza Navona is laid under water for the sake of coolness, and people go through this water in carriages and on foot; but it is found necessary to remove carefully all corruptible filth from the piazza, both before letting on the water and after it is taken off; for if the wetted impurities remain during the ensuing night, the air becomes filled with effluvia most offensive to the sense and hurtful to health.

By the advice of Lancisi an edict, or what is termed a Motu Proprio, from the form of words at the beginning, was issued by the pope, in 1709, for cleaning the streets of Rome. In the present day the cleaning of the streets is very much neglected.

Sometimes too dry a summer is detrimental to the health in Rome, but Lancisi found, that unhealthiness more frequently appeared in wet summers.

The Sirocco.—The south-east wind, called, in Italian,* Sirocco, is unhealthy and debilitating at Rome, but does not produce fevers. Some of the injurious qualities of this wind may be derived from its blowing over the Pontine marshes, which are eighteen English miles in length, nine broad, and their nearest point is thirty-five English miles from Rome; but the south-east is an unhealthy wind also in other parts of the Mediterranean, as Hippocrates mentions.†

* See page 273.

† Hippocrat. Aphorism. 5.

A hundred years before Lancisi's time it was customary to construct the houses at Rome so that they had no windows to the south; but, in his time, in consequence of the draining of some marshes, it was found that there was no inconvenience in having windows to the south, and the houses were then built with the greatest part of their windows to the south.

Occasional Cause of Epidemics at Rome.—Science has not been able to give a satisfactory account of the causes of the appearance of epidemics at particular times and in particular countries. The ancient Romans, when violent epidemics prevailed, knew not what to do, and had recourse to the books of the Sybill. The moderns are as much at fault, and are still to seek in such cases. *

Lancisi is of opinion, that the chief causes of the epidemic diseases which occur at Rome, are the effluvia of marshes and of stagnant water, and also the cold north wind in spring, succeeded by a south wind. The diseases produced by these two causes are intermittent fevers or agues, which he terms febris castrensis, catarrhs, continued fevers, and inflammation of the throat and lungs.

Villas.—Alexander Petronius, a medical author,

* "Gravis pestilensque omnibus animalibus aestas excepit, cujus insanabili pernicie, quando nec causa, nec finis inveniebatur, libri Sibyllini ex S. C. aditi sunt."—Liv. Lib. V